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ORIGINAL ARTICLES.

THE AFTER-TREATMENT OF CATARACT EXTRACTION AND IRIDECTOMY ACCORDING TO DR. MICHELL'S METHODS.

BY T. E. MURRELL, M.D.,

OF LITTLE ROCK, ARK.

Dr. Charles Michell's method of dressing an eye after extraction of the lens and after iridectomy, together with the non-exclusion of light from the eye at any time subsequent to the operation, was brought before the general profession of the country for the first time in St. Louis last May, in the Section of Ophthalmology of the American Medical Association. As might be expected, it created no little surprise. Opinion was divided as to the propriety of such seemingly extreme measures. Dr. Chisolm said, for one, he would test it. How many others have made a test of it I know not, but it is somewhat surprising that so little literature on the subject has thus far appeared. Evidently few have ventured to put the matter to the test else, I think, more would have been written in commendation of so valuable an acquisition to ophthalmic surgery. In the *American Journal of Ophthalmology*, June number, Dr. Chisolm reports sixteen cases in which he used Dr. Michell's after-treatment with most flattering results. Again, in a more lengthy report in the *N. Y. Medical Record*, of July 31, he further comments on the after-management of extractions, and adds other cases from which he draws conclusions more firmly confirming his faith in the safety and advantages of the innovation. Dr. Michell very modestly gives an account of how he came to adopt this dressing, and to allow the patient abundant light after extractions, in the third number of the *Archives of Ophthalmology* for 1886. He has been too modest in bringing this matter before the world; besides, I regard it so valuable as to have made it his duty long since to have done so. As for myself, I am willing to subscribe to Dr. Chisolm's strongest commendations, having used no other after-treatment in extractions and iridectomies since last May, when Dr. Michell very kindly gave me in person all the details of the treatment. Nothing can be more simple, and nothing more sensible.

As would be expected, claims of priority are now coming in. One writer asserts that for fifteen years or more Dr. Levis, of Philadelphia, has discarded bandages. He is not alone in this. Some of the English and Continental surgeons have been in the habit of dressing the eye after extraction with strips of adhesive plaster, but they were very careful to keep the patient in a *dark room*. See "Wells on the Eye," third edition, p. 268; "Haynes Walton on the Eye," third edition, pp. 788–89, and other works that might be cited; some preferring the compress bandage, some the adhesive strips. As I understand, Dr. Levis' dressing consists of a piece of black court-plaster completely covering both lids, leaving only a small opening at the inner canthus to allow the escape of tears. I don't know whether he uses a dark room or not, but he could not more effectually exclude the light than by the above dressing. In the August issue of *Progress*, Dr. Dudley S. Reynolds, of Louisville, Ky., puts in a claim in the following words: "The use of the bandage after extraction of cataract has long since been abandoned by the writer. Instead of this useless and sometimes dangerous form of dressing, a little dry absorbent cotton, secured by strips of adhesive plaster drawn from the cheek to the forehead, answers a better purpose." He makes no mention of a dark room, but had he not regarded the light, he would not have omitted putting in his claim here also, since it is one of the strong points in Dr. Michell's methods. Dr. Reynolds' dressing defeats two important features in the after-treatment under consideration, viz.: the filling in of the orbital space with cotton heats the eye, excludes the light, and precludes the daily inspection of the lids without disturbing the dressing; and second, the play of the facial muscles would certainly disturb the equilibrium of the dressing through traction on the adhesive strips. These, the two strongest claims yet put forward, speak for themselves, while whatever honor may come of this valuable measure certainly belongs to Dr. Charles E. Michell.

In my former experience after extraction I had much trouble with slow convalescence, and long-continued photophobia oftentimes; and, in addition, quite a large percentage of iritis of a mild grade, which usually made its appearance after the fifth day. None of these have troubled me with the new after-treatment, and I now feel quite sure that the majority of iritic inflammations were the result of exposure of the eye to a bright light at the time of the first examination. It was always painful and caused a flow of tears. Well do I remember how I used to go through the eye wards in Baltimore and in New York with the surgeon to dress the eyes op-

erated for cataract, with candle in hand, to see how to change the dressing. And when I began practice I followed in my preceptor's tracks, and carefully excluded every ray of light. I came to notice, however, in the course of time, that the more effectually the light was excluded the more intense and the more persistent the photophobia; hence I came gradually to be less careful of utter darkness, until I had come to using a well lighted room for the patient, and only using the cotton and bandage dressing over the eyes. I always directed, if the light was too bright, to put a piece of black goods over the bandage, but I found they seldom called for this. On hearing, therefore, of Dr. Michell's after-treatment, I felt prepared to try it at once. To show what I founded my faith on, I give, by way of illustrating the effects of this simple treatment, a few cases from my record book:

Case 1.—Miss W., æt. 23. Old irido cyelitis, with exclusion of the pupils and opacity of the lens in each eye. V= perception of light. Extracted the right lens, leaving a thick calcareous capsule. Dark room and bandage. Ten days later removed the bandage permanently and put on a shade for the eyes. There was some iritis at this time, which soon subsided, but the most intense photophobia continued for fully a month, and it was after two months or more that she could tolerate full daylight without discomfort. Some months later I extracted the left lens in its capsule, which was also treated with bandage and dark room, and was followed by a like train of iritis and long continued photophobia. These operations were performed last winter and spring. In September of this year I extracted the calcareous capsule from the right eye. It was a dense hull of lime salts so thick that it crushed like egg shell. A large corneal section was made and the mass seized with forceps and withdrawn. Both eyes were dressed with a narrow strip of isinglass plaster just long enough to catch well on the two lids and hold them together. The room in which she stayed had two large east windows without blinds, curtains or shades. and I directed that none be put up. The walls being white, the light in the room was very bright. The morning sun shone in her face and she found it more comfortable to put a screen between her face and the window until the sunshine had gotten off of her bed. No other discomfort was complained of. On the fifth day the left eye was turned loose, and on the seventh day the right. She was at once given the liberties of the house, and on calling to see her the next day I found her walking in the yard barehead, with a bright sun overhead, utterly indifferent to the light. There was no iritis or photophobia at any time.

Case 2.—Mrs. R., æt. 81. Hyper-mature cataract in the right eye, dislocated downwards fully one-third its diameter; fluid vitreous.

July 22, made an upward iridectomy. Lids closed with narrow strips of isinglass plaster and full daylight allowed in the room. Six days later liberated both eyes and let her go where she pleased. A mild conjunctivitis ensued, but there was no photophobia whatever. The result of the iridectomy was not satisfactory as regards vision on account of a filmy opacity above the periphery of the lens; so on September 29 I removed the lens and its capsule. The after-treatment was the same as before. No pain at any time. On the eighth day removed the plaster and gave her the liberties of the house. There was union by first intention, a clear black pupil, and not the slightest trace of iritic engorgement. The effect of full daylight was not at all disagreeable from the first exposure of the eye. Ophthalmoscopic examination revealed a fluid vitreous with floating opacities from former choroiditis, and of course there was but moderate vision.

Case 3.—Mr. S., æt. 76. Cataract in both eyes. August 2 I extracted the right lens and dressed both eyes in the usual way, allowing the light in the room just as they had been accustomed to having it. On the fifth day I removed the strip of plaster from the left eye, and on the seventh day from the right. Perfect healing, no iritis, no photophobia or lachrymation, no discomfort of any kind. He was out in the bright sun in less than two weeks, and remarked that daylight seemed brighter to him than it ever did in his life, much like being near an electric light; but it was not at all disagreeable, and caused no irritation of the eye. He soon went to work at his trade—type setting.

Case 4.—Mr. Y., æt. 60. Is nearly blind in his left eye from old choroiditis, and has immature cataract in his right eye, with which he can still count fingers readily at four feet. I determined to operate. On September 12 I extracted the right lens, taking pains to remove as nearly as possible all the cortical substance. Closed the eyes with a strip of isinglass plaster on each, and directed that the window blinds be left open and the curtains kept up. Before leaving the room I noticed that the lids of the right eye had not been drawn closely together, sufficient space intervening for me to see the cornea. I did not interfere, however, as Dr. Michell had told me he frequently left a small space between the lids on purpose to allow the easy escape of the tears. When I called the next day the patient exultingly told me how he lay in bed and counted the bars in the window frame, and his fingers at arm's length, and saw across the street with the eye that had been operated on. As all was going well, I did not disturb his recreations.

On the sixth day I turned his eyes loose, and on the eighth day he walked to my office, underwent a thorough ophthalmoscopic examination and test for glasses, and took the train for home, one hundred miles distant. I received a letter from him a few days since, saying his eye had never given him a particle of trouble. I never saw so little restraint after operating for cataract as in this case, nor did I ever see smoother healing.

Case 5.—G. W., Negro, æt. 70. Cataract in both eyes, mature in left. November 6 operated at the Medical College before the class, removing the right lens. Operation smooth. A narrow strip of plaster to close each eye. After the operation he walked down stairs and sat by a stove nearly an hour, waiting for some way to get home. Finally a wagon called and he got in and rode to his home, more than

a mile distant, over very rough streets. I directed that the light should not be excluded from the eyes, but his prudent wife carefully sealed all cracks and hung quilts over all windows. On calling the following day I found a pitch-dark room, and in addition found the old darkey lost in a wilderness of blankets and comforts wrapped about his head. I at once stripped all the windows and uncovered his head, and enjoined him and his wife not to repeat it. On the fifth day from the operation I found the old man with both eyes wide open, enjoying himself in looking about the room. Finding the corneal wound nicely healed, I did not put on the strips again, but let him go free. About two weeks later I saw him driving a wagon on the streets. Not long since he called at my office and received a formula for glasses, with the effect of which he was delighted.

It is not worth while to report other cases, including iridectomies, as those already given are sufficient to demonstrate the effect of not placing the patient in the dark after an extraction or iridectomy. The foregoing cases have not been selected from the most favorable. In the second case there was fluid vitreous and a very hazardous eye to operate on, and which I undertook with considerable misgivings. Those who have attempted removing a dislocated lens with a fluid vitreous can appreciate my feelings. And in case 3 there was an incurable stricture of the nasal duct, chronic abscess of the lachrymal sac, and a lachrymal fistula. I should have greatly dreaded bandaging this eye, covered with cotton, and yet with free escape to the secretions and careful daily inspection of the lids and soaking away the secretions from the inner canthus with absorbent cotton, it healed without an untoward result.

I have not yet ventured to treat iridectomy as an office operation, as does Dr. Michell, but my experience with case 5 goes far toward proving its safety. I leave to others to draw their own conclusions from experience, as I have done, and in conclusion will say, I shall use no other method of after treatment of extractions and iridectomies until something better offers, which, in the nature of things, I cannot now conceive of.

111 E. Fifth St., Little Rock, Ark., Dec. 20, 1886.

INTUBATION OF THE LARYNX, HISTORY OF FOUR CASES.

BY L. H. DUNNING, M.D.,
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The unusual interest manifested by physicians in the treatment of pseudo-membranous croup by the O'Dwyer method, induces me to report the following cases:

Case 1.—Nov. 18, 1886, I was asked by Dr. Kettring to see a child of Mr. Galata, of this city. I responded at once and found a well-marked case of pseudo-membranous croup that had been in progress six days. It had commenced lightly and gradually grown severe until now it threatened to prove speedily fatal. I advised intubation of the larynx or tracheotomy, giving preference to the former procedure. The family consenting, Dr. Kettring was called and concurred in my diagnosis, and agreed to the plan of treatment. We proceeded at once to introduce the tube, using the size for a child 2 to 3 years of age, our patient being 2 years and 4 months old. A marked improvement in respiration occurred in two or three minutes after the thread was removed. Stimulants were ordered, and drachm doses of a saturated solution of potass. chlor. every three hours. At 4 P.M., five hours after intubation, the patient was resting and breathing easily. Continued the same treatment.

19th. Patient rested well last night, but did not sleep much. She is now breathing easily. Temp. 100, pulse 115 and resp. 24 per minute. The child objects to medicine and nourishment, so everything has to be forced, and family are not willing to give either. The same orders were given as yesterday.

20th, 8 A.M. Patient rested but little during the night, but breathed easily. This morning is quiet. There is considerable cough and profuse expectoration, in which occasionally appear shreds of pseudo-membrane. The patches of membrane have nearly all disappeared from the fauces. The bowels moved several times during the night. Temp. 99.5, pulse 105 and resp. 20 per minute. Has taken but little nourishment. Same treatment. 5 P.M. Same condition as in the morning, except that there are sonorous and sibilant râles to be heard all over chest.

21st, 8 A.M. Bronchitis somewhat more pronounced. The breathing is easy and regular, and the pseudo-membrane has all disappeared from the fauces. The expectoration is profuse. The patient is very weak, and this is due largely to its refusal to take nourishment. Believing the danger from croup had nearly or quite disappeared, the tube was removed, Dr. Hitchcock assisting. It was quickly removed upon first effort, and came away clear of obstruction. After its removal there were but slight indications of croup. From this time on the case was uneventful, passing on to complete recovery in a few days.

Case 2.—Essie B., aged 2 years and 4 months. She had been ill of bronchitis several days. Upon November 26 she became very hoarse, and there was a slight croupy cough.

Nov. 28, 7 A.M. During the night the child had had several slight paroxysms of dyspnœa that yielded readily to emesis.

Dec. 1. Despite the most energetic measures, there has developed a most alarming case of membranous croup. There is continuous labored breathing and severe and prolonged attacks of dyspnœa. Dr. Kilmer had seen the case with me a number of times. He was called again, and after consultation we decided to intube the larynx, as in this procedure or tracheotomy we saw the only hope of recovery. At 1 P.M. the tube was introduced, and considerable difficulty was experienced in securely placing it in position. The difficulty was in pushing it down into place. There was considerable resistance, and when left in place was inclined to rise out of the larynx. After the second effort it was left well in position.

In removing the thread it broke off, but as we could see nothing of it on depressing the tongue, we thought best to wait a time to see if it produced any reflex irritation. At the end of one half-hour the tube had given no relief and the child had one severe attack of dyspnœa, so it was removed, and in a few minutes replaced with the assistance of Dr. Hitchcock, Dr. Kilmer being detained elsewhere. This time the child experienced perfect relief, and soon fell into a quiet sleep.

6 P.M. Was called in haste and found the patient apparently in a state of collapse, having cold hands and feet and a pinched, sunken appearance about the face. The respirations were hurried, but not difficult. Ordered whiskey and comp. spts. lavender by mouth, stimulant and nutritive enema. The nurse was directed to rub the child with hot whiskey frequently. 8 P.M. Patient has rallied and is now breathing easily, though sonorous and sibilant râles are distinct over whole chest.

Dec. 2. Child rested well during the night, but had a few slight attacks of dyspnœa.

Dec. 3. Respiration hurried and somewhat difficult. Patient has had two attacks of dyspnœa during the last hour. Large quantities of mucus and shreds of pseudo-membrane are being coughed up. Loud sonorous and sibilant râles heard over upper part of chest. 12 M. Dyspnœa more frequent. Breathing more labored and râles more distinct. Over the upper part of the chest rough grating sounds are heard instead of respiratory murmurs. 5 P.M. The condition above described is more marked. Had consultation with Drs. Kilmer and Hitchcock. It was concluded that there was an extension downwards of the diseased condition, that the larger bronchial tubes were becoming gradually occluded by intumescence of the mucous membrane and by deposition of pseudo-membrane. Prognosis exceedingly unfavorable. Even now the respiration is so much less than it was before the tube was inserted that the parents refused to allow it to be removed. From this time the patient grew gradually worse until 9:30, when it expired.

Case 3.—Merritt F., aged 3½ years, resides in the country. I was called to see him December 9, 1886. Found a well-developed case of diphtheria, with pseudo-membrane covering both tonsils, soft palate and uvula. Patient complained of being tired; was sitting up part of the time, and the remainder of the time lying upon the lounge. The temperature was 100.6, the pulse 120, and resp. 22 per minute. Prescribed tr. chlor. ferri and chlor. potass. locally, and internally small doses of calomel, and sponge-baths of tepid water, to be followed by inunctions of quinia and lard, were also ordered.

Dec. 11. The throat is clear of pseudo-membrane and patient otherwise improved.

13th. The father of the child reported at my office that his son was resting well, but that he complained of the same tired feeling, and that his throat was noticed that morning to be covered with the same white patches.

14th. Was sent for early in the morning to see the little boy. Reached his bedside at 11:30 A.M., and learned he had had the croup during the night. Examination showed loss of voice, stridulous expiration, and extreme recession of the chest walls. Fauces were covered by pseudo-membrane. He had two severe attacks of dyspnœa while I was examining him. I advised intubing the larynx. The parents consenting, a messenger was sent to town for instruments. At 2:30 P.M. they were brought, and Dr. Hitchcock accompanied the messenger. The doctor examined the patient and gave it as his opinion that we had a case of diphtheritic croup to deal with, and that it would prove fatal in a few hours unless relieved by intubation. We proceeded at once to introduce the tube, and succeeded without difficulty. Immediate relief was given, the child falling into a quiet sleep within five or ten minutes after he was lain down. We directed the mother to give enemata of beef-tea and whiskey, or milk and whiskey, every four hours, and ordered quiniæ and potass. chloras by mouth, with limited quantities of liquids. Cracked ice in limited quantities was allowed. 9:30 P.M. Child still breathing easily. The pulse was quite rapid, 140 per minute, temp. 101.5 and resp. 34. The hands and feet were inclined to be cold. Ordered whiskey in 10-drop doses every hour, that the child be bathed frequently with hot whiskey and water, and take tr. digitalis and tr. nux vomica in appropriate doses.

15th, 7 A.M. Child in better condition than last night. Hands and feet are warm. Respiration 30, temp. 100 and pulse 130. Considerable mucus and shreds of pseudo-membrane are being coughed up. The alæ nasi expand and contract during respiration, and there is slight rising and falling of the trachea. Continued whiskey and enemata, discontinued digitalis and nux vomica, and ordered sol. pot. chloras in teaspoonful doses every two hours, and left gr. ij doses of Dover's powders to be given as needed to relieve restlessness. The child swallows readily, but coughs violently after each act, so we give as little as possible by the mouth.

16th, 3:30 A.M. During a violent paroxysm of coughing the child expelled the tube, with a considerable quantity of mucus and flakes of pseudo-membrane. I saw the patient at 6:30 A.M. The father stated that during the first two hours after the tube was expelled the child breathed without much effort, but that during the last hour he had encountered more difficulty, and that the difficulty was increasing. Now there is marked dyspnœa and occasional severe paroxysms. The tube was reinserted with the assistance of the attendants, and gave complete relief. Same treatment continued, with addition of quinia, grs. ij every two hours.

17th, 7 A.M. Patient showing signs of exhaustion. Continued same treatment and ordered more nourishment by mouth. Child swallows better when he drinks from the cup.

18th, 7 A.M. Patient better. Temp. 99, pulse 130, resp. 28, breathing easy. Concluded to remove the tube and attempted to do so with the assistance of the attendants, but made a complete failure. I made four attempts, each time seizing the tube, and each time the forceps slipping off. I ascribed my failure in part to the inefficiency of the assistants, as

the one holding the gag would allow it to slip out of the mouth. On this account my left index finger was fearfully bitten by the patient. Our patient being much exhausted by our efforts, he was put to bed and allowed to rest. Same treatment continued.

19th, 6 A.M. This morning, with the assistance of Dr. Hitchcock, the tube was easily and quickly removed. Our efforts produced but little exhaustion, and patient continued to breathe without effort after the removal of the tube. Ordered citrate of iron and quinine, also fld. ext. hyoscyamus to relieve restlessness. Owing to difficulty in swallowing, enemata were directed to be continued.

20th, 12 M. Patient breathes easily. Swallowing produces coughing; his strength is returning. From this time on the case pursues a favorable course, though the patient was not able to speak aloud for two weeks.

Case 4.—January 3, 1887, was called by Dr. Kilmer to see a case of membranous croup. The patient was a child 2 years and 3 months old. The croup was of six days' standing and had gradually developed. Now there is marked dyspnœa; considerable pallor, and rising and falling of trachea, all indicating the approaching fatal termination. We concluded to try intubation. It was accomplished easily and relieved the dyspnœa. Prescribed stimulants and inunction of quinine and lard, and directed the parents to give nourishment freely and allow the child a liberal quantity of cracked ice.

4th, 7 A.M. Patient seen by Dr. Kilmer, who kindly reported to me as follows: "The child breathes easily, though rapidly. There is slight expansion and contraction of the ala nasi during respiration. Temp. 99, pulse 140, and resp. 40 per minute. She swallows well without much cough. I feel hopeful of recovery, but there is a condition of exhaustion that is somewhat unfavorable." At 2 P.M. the doctor reported to me the patient died at 10:30 A.M., and that from the description given him by its father it probably died of exhaustion.

There are a few points I have observed in the five cases (one previously reported) of intubation of the larynx I consider worthy of note. One is the marked relief this means gave to the most distressing symptom, viz.: the labored breathing. So great has been this relief in all the cases that, if called upon so to do, I should use the tube in a child of mine if I could not hope for any greater benefit.

Another notable feature in the clinical history of all the cases except the first—and it may have been present in that case, as it was not under my observation—was the condition of exhaustion that appeared a few hours after the introduction of the tube. In both of the successful cases this condition very nearly proved fatal, and in the fourth case it is believed to have resulted in death. There are doubtless several factors operative in the production of this exhaustion; the disease itself is one tending toward exhaustion, after the introduction of the tube there is no further need of the powerful voluntary effort so long required to obtain sufficient air to sustain life, the patient rests easily, and, like the freezing man, is willing to sleep his life away. The partial withdrawal of nourishment on account of the difficulty the patient has in swallowing also has its influence in bringing about exhaustion.

Moderate doses of alcoholic stimulants, quinine, nutritious food, and gentle means calculated to arouse the flagging energies of the patient, were the means found most beneficial in this unfavorable condition. It is my firm belief, after having observed these few cases, that the recovery of the patient after intubation of the larynx will many times depend largely upon the skill exercised in the after-treatment.

Much has been written and said about the difficulties encountered in removing the tube. The writer has never experienced any such difficulty, except as mentioned in the history of case 3; indeed, he has invariably, except in this instance, found it much easier to remove the tube than to introduce it. He has never given an anæsthetic in either case, and never had any previous practice upon the cadaver. He does not believe either is essential to skilful and successful accomplishment of this surgical procedure. Any surgeon possessing a knowledge of the anatomy of the parts and a good degree of surgical skill, will be able to easily and quickly introduce the tube, and to remove it when the proper time arrives.

By a little experimenting at my office with the tube and forceps for its removal, I came to the conclusion that the difficulty in removing the tube in case 3 was due largely to the fact that the position of the tube was such that the long diameter of the opening in the upper extremity ran obliquely across the larynx instead of antero-posteriorly, as intended. Upon trial it will be found that as we ordinarily introduce the forceps into this opening the blades expand, if the tube is in normal position, in the direction of the long diameter, but if the tube is rotated, even slightly, it is not so; the blades of the forceps will not open in the direction of the long diameter of the opening in the tube, but obliquely across it. Now, if the blades of the forceps are opened and traction is made, one of two things will occur: either the tube will rotate so that the axis of the long diameter of the opening in the tube and the expanded blades of the forceps will correspond, or the blades of the forceps will slip out of the opening. The latter occurred to the writer four successive times in case 3. Having discovered the difficulty, the tube was the following day quickly removed by the following procedure, viz.: the forceps were introduced in the usual manner, and the closed blades inserted well into the opening in the tube, the handle of the forceps was carried slowly and gently from side to side. While thus describing an arc of a circle with the handle of the forceps, the blades were opened two or three times to determine, if possible, the direction of the long diameter of the opening. Very soon it became evident that when the handle was considerably to the right of the median line, the blades of the forceps, when expanded, seized the tube in the line of the long diameter of the opening, and then, with slight effort, the forceps and tube were withdrawn together.

One reading the description of this procedure will doubtless think it required so much time to execute

it that the child was in great danger of suffocating. It was not so, as only a few seconds were required to effect the end in view, the removal of the tube. Whether the tube was placed when inserted in the position he found it, or was properly placed and subsequently rotated, the writer is unable to say. It seemed to be a matter of little importance so far as the recovery of the patient was concerned, but was in the matter of its removal of considerable consequence. Should he in the future experience much difficulty in the removal of the tube, he will conclude it is in a mal-position and resort to the same procedure that was successful in the case related.

THE TREATMENT OF INSOMNIA BY FOOD, BATHS AND EXERCISE.

BY WM. G. EGGLESTON, M.A., M.D.,

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The first case of insomnia with which I had to deal, my own case, taught me the utter uselessness of depending solely upon hypnotics for the relief of this condition; and subsequent cases treated successfully by food, baths and exercise have shown that hypnotics are not only not to be depended upon, but that in many cases they are not required at all, and do more harm than good. I do not wish, however, to be understood as advocating the disuse of hypnotics in all cases of insomnia; my remarks must be taken to apply only, so far as my experience goes, to febrile insomnia, or the insomnia of convalescence from acute diseases, to the condition of sleeplessness arising from long hours of mental activity or excitement, and to insomnia from exhaustion. The two last may often be classed together.

In febrile insomnia there is a greater or less degree of cerebral excitement, which, when active, calls for an exhibition of bromides and chloral. In a still more active stage morphia may be indicated, especially if pain, such as headache or backache, be so pronounced as to demand attention; but as a rule, drugs which interfere with elimination should not be given. On this account paraldehyde is of very great value in some of these cases. In the eruptive fevers, when the cutaneous irritability is so great as to induce insomnia, sleep may be often produced by the use of warm or tepid baths. In many of these cases of febrile insomnia, I have noticed that the patient would often fall asleep soon after the administration of food, and more particularly if a bath was administered just before the food was given.

Wakefulness in these cases, and in many others, may be considered as the symptom of an irritable weakness of the brain or nerve centres. We know that in the latter stages of a protracted illness the condition of insomnia often depends upon the malnutrition of the patient, and that the indication is to furnish material which will delay or stop the processes of malassimilation or disassimilation. The failing power of the heart, due probably to the same irritable weakness of the nerve centres which causes the wakefulness, demands, as we all know, such diffusible nutriment as the system can assimilate with the least expenditure of force; and hence, we give milk and meat juices, sometimes alcohol, but rarely opiates. There is a tendency, I believe, to rely very much upon hypnotics in these cases, as in all cases of sleeplessness; and I believe this to be wrong. To say nothing of other objections to their frequent use, they disorder the stomach, and in the weakened condition of the patient his system soon falls into the habit of demanding these aids to artificial sleep. There is usually but little positive appetite, and bromides and opiates take away whatever there is.

But it is not alone in the cases of febrile insomnia that the nervous system is in a condition of irritable weakness. It is frequently seen, and I believe it to be the cause of a very large proportion, if not all of those cases of insomnia from intense mental activity or excitement, and of insomnia from exhaustion. Among hard working college students, newspaper men, accountants, and men whose lives are given up to literary pursuits, insomnia from exhaustion or excitement is not an uncommon affection; and it is common also in women who have been exhausted by protracted nursing of a sick child or friend, or who have been subjected to some unusual excitement. In dealing with this condition it is not sufficient to say that a complete change of habits must be made. In the majority of cases the patient cannot change his or her habits, and take a long vacation or a protracted voyage; and in the majority of cases this is not necessary.

I have noticed that most students, and women, who are troubled with insomnia are dyspeptic; and, in fact, I rather believe that a greater or less degree of dyspepsia or apepsia, and gastric irritability, will be found in all persons who are much troubled with insomnia. It must be very evident that a course of bromides or other hypnotics will not ameliorate the condition of the gastric or intestinal mucous membrane. It is quite clear also, that bromides will not permanently lessen the degree of nervous irritability which depends on the want of proper food. I have found it not only possible, but comparatively easy to treat cases of this kind without a single dose of any hypnotic, and without a change of or vacation from work. In some cases one or two doses of bromide of sodium or potassium, or paraldehyde has been necessary.

In cases of students and women who complain of insomnia, I have usually found that they take but little exercise, that they are constipated, have but little appetite, and suffer with gastric oppression after the main meal of the day, whether it be about midday or in the evening. They usually drink tea or coffee, sometimes immoderately. If the case has gone on for some time, there is an evident condition of anæmia. The first thing I do is to unload the bowels, and keep them open with cascara sagrada, though to begin with I usually order blue mass. The medicine ordered, as a tonic, is usually either nitro muriatic acid (equal quantities of nitric and hydrochloric acids and water), or tincture of the chloride of iron ℥ij, Fowler's solution ℥ij, and strychnine gr. j. Two to six drops after each meal (or

more), or else Fowler's solution alone. In the majority of my cases with students, I have used small doses of these drugs, and sometimes no medicine except the purgative. They are then instructed to eat before going to bed, having put aside every form of work at least half an hour before bed time. A formal menu cannot be made out for these cases; they should simply be instructed to eat, and if they are hungry they should eat whatever they want. A glass of milk and a biscuit or a piece of toast is sometimes all that can be taken at first; or a mashed potato buttered. In a short time the night appetite will grow, and the appetite will then need no particular directions. If possible the night meal should be taken in another room than the sleeping apartment, and for men in the city, it will be found advantageous to go out to a restaurant. The idea of going out for something to eat, and having to wait a short time for it will exite the appetite.

Before eating, however, a bath should be taken. I much prefer cold or cool baths, which should be given with a sponge or stiff brush, and the body thoroughly rubbed off with a coarse towel afterwards. The bath need not be more than five minutes in duration. The objection to the warm bath is that the patient is liable to take cold after it, and it is not so refreshing as a cool or cold bath. After the bathing and rubbing, or after eating, a moderate amount of exercise should be taken. For this a few minutes with Indian clubs or dumb-bells is sufficient. Further than this, the patient should go to bed at the same hour every night, and arise at the same hour every morning.

I have seen a considerable number of cases of insomnia among night men on morning newspapers. These men usually take the evening meal about 6 o'clock, and then often work until 2 A.M. Within the past two years and a half, I have had more than twenty cases of this class, and I have not given a dose of medicine, other than a purgative, to a single one. These patients cannot conveniently stop to take a bath, and then go out to eat. They are instructed to go from the newspaper office to a restaurant, and eat what they want. Here we usually find that the appetite is good. After eating, anything from half a dozen oysters to a good steak, or as much, in fact, as one would eat for a hearty breakfast, they go home, bathe the face, head, neck and chest, take five minutes' exercise and go to bed. In each one of my cases of this class, the patient has reported that the treatment was a success from the first.

Since the age of 18 I have been more or less troubled by insomnia, and nothing has ever given such decided relief as a course of hearty meals just before going to bed. When the temporary insomnia has been relieved by this, I continue the sponge-baths and exercise before going to bed; but sleeplessness often returns after a sustained degree of mental labor and excitement, and is almost immediately relieved by a generally hearty meal before going to bed. At 19 years of age, while a student of medicine, I was dosed for this condition with every then known hypnotic, without any perceptible effect. Accidentally, I found that after eating late at night I slept well; and I now make it a rule never to go to bed hungry, and always to eat at night when I am in the midst of an unusual amount of work, or engaged in work of an unusually exciting character.

I have had to deal with only two cases of insomnia in old people. In both these cases they had been advised to take a "night-cap" before going to bed. At first the remedy was efficacious, but in a short time it was found that the quantity of alcohol in the "night-cap" had to be increased, or it had no effect, and finally an excessive quantity of alcohol was demanded. I rapidly diminished the quantity of alcohol as the amount eaten was increased, until, with with the aid of a full supper and no alcohol whatever, the sleep was plentiful and much more refreshing than before. I do not know of anything which will more readily impair a digestive apparatus than alcohol on an empty stomach. Further than this, one runs the risk of inducing the alcohol habit by prescribing it in this way; and it must be acknowledged that the drowsiness induced by alcoholic drinks will not pass into a natural and calm sleep; and an artificial sleep is only demanded when a patient is positively ill. A cup of hot beef tea (made from some good extract of beef) taken just at bed time, will often be sufficient to cause a good natural sleep.

There is a popular superstition that grown people should not eat immediately before going to sleep; that it will give them indigestion or "night-mare," or both. I cannot see why adults are so very different in this respect from babies. We know that young children awaken at night and must have something to eat before they will sleep quietly; and some children actually fall asleep with a nurs ng bottle leaking into the mouth. It may be true that digestion is carried on slowly during sleep, and that the digestive function is less active; but here one need not be in a hurry for the completion of the operation. The average person should be in bed seven or eight hours, which is time enough for the digestion of almost anything edible. In our American city life I think that digestion carried on during sleep probably has the better chance for thoroughness.

65 Randolph St., September 2, 1886.

CASES OF POISONING FROM THE EATING OF DRIED BEEF.

BY R. HARVEY REED, M.D.,
OF MANSFIELD, OHIO.

On July 31 I was called to the family of Mr. James E., living at 92 East Market St., and found all the members of the family then at home, sick with a peculiar line of symptoms, of a similar character. I at once suspected a toxic agent of some kind, and on inquiry found my suspicions well grounded. The family consisted of Mr. E., aged 67, Miss E., aged 21, James E., aged 16, and Mrs. E. (age unknown); the last being away from home at that time was not taken ill. Upon further inquiry I found they had all been in their usual health the day before (July 30), on the afternoon of which day they had bought some chipped beef, and all had eaten freely of it for supper.

Miss E., a rather delicate young lady, was taken violently ill about 8:30 o'clock on the same evening, first vomiting the contents of the stomach, after which the emesis still continued throughout the night, the patient throwing up a greenish, frothy mucoid substance, which came up in great quantities. She had marked thirst, with constriction of the fauces and great prostration. Shortly after the vomiting commenced the bowels began discharging, and would move every time she vomited; the discharges consisting of a brownish liquid substance. This was associated with more or less griping.

A homœopath had been consulted in the evening, but considered it a case of cholera morbus and treated it accordingly. The patient not improving as desired, sent for me the next morning, at which time I elicited the above history, and found the patient with a fiery red tongue, a bitter taste in the mouth, vertigo, twitching of the muscles, cold extremities, no fever, and with a pulse of 120, and very much prostrated. With others of the same family suffering in a similar manner, and the associated history, I was led to the legitimate conclusion that it was the result of eating poisonous beef.

James E., Jr., had eaten of the beef on the evening of July 30, but being a very strong, healthy young lad, was not taken sick until after breakfast the next morning, at which time he ate still more freely of the same dried beef. In about an hour and a half he was taken with severe vomiting, which continued for several hours, but was not followed with any considerable diarrhœal discharge, although the bowels were moved quite freely. He complained of a bitter taste in the mouth, with a deathly sickness and weakness, and vomited a peculiar mucoid substance, after discharging the food contained in the stomach; his pulse was 88, and not associated with fever.

James E., Sr., ate but little of the beef for supper, but said he had had a bad taste in his mouth all night. He was not taken sick until after breakfast, at which time he ate of the beef more freely, and in about an hour and a half was taken violently sick; first with purging, which was soon followed by violent vomiting, first of the contents of the stomach, and then of a greenish frothy mucoid substance which was very tenacious, and would string out from his mouth to the floor like white of egg; the tongue was fiery red and covered with slime. He said he had a peculiar sickening sweetish taste in the mouth, and was very dizzy. He had aphonia, twitching of the muscles, some trouble with the vision, but not marked, at times complete loss of consciousness, and at one time was for several seconds in a spasm. He had great difficulty in urinating, the urine being scanty and high colored; pulse 80 and weak, no fever; extremities cold, and the surface of the body covered with a cold sweat, with general exhaustion and depression. Specimens of the urine were secured from all the patients suspected of beef poisoning, and carefully examined, chemically and microscopically, showing the following results:

Miss E.: Color, light straw; reaction neutral; sp. gr. 1022. A trace of sugar was found, but no albumin. Earthy phosphates not materially increased.

James E., Jr.: Color, very light brown; reaction acid; sp. gr. 1020. No albumin and no sugar, and but few earthy phosphates or deposits of any kind.

James E., Sr.: Color, a dirty yellow; reaction acid; sp. gr. 1028. No albumin and no sugar, but large quantities of earthy phosphates, and the chlorides.

The general outline of treatment consisted in the use of opium and bismuth, together with lime-water and milk, with stimulants and diuretics, followed with tonics and pepsin; while locally were applied heat and stimulating lotions, together with brisk rubbing.

The young man soon recovered, and in a few days felt as well as ever. The young lady was several days in making a recovery, and did not get over the effects for almost a fortnight. Mr. E., Sr., did not entirely recover from the effects of the poison for more than two weeks. They were all troubled more or less with indigestion and constipation for some time after they had recovered from the primary effects of the poisonous ptomaines.

Specimens of the meat were procured, and through the kindness of Dr. J. U. Barnhill, of Columbus, O., sent to Prof. David O'Brine, of the Ohio State University, for a chemical analysis, who subsequently reported finding the ptomaines. His full report is herewith given:

"No. 341. Chemical Laboratory of the Ohio State University. Quantitative analysis of —— beef from Dr. Reed, Mansfield, Ohio. Determination of —— ptomaines or cadaveric alkaloids. Method of analysis—described by Selmi.

"Found ptomaines and confirmed by tests=H_2SO_4—$I_2O_5Cu(C_2H_3O_2)_2H_3PO_4$.

"The substance was nicely shown under the microscope. The method of analysis is described in 'Blyth on Poisons,' pp. 461–468."

Dr. Barnhill also sent some of the meat to Dr. Leech, of Columbus, for microscopical examination, besides making a careful microscopical examination of the meat himself, which revealed in both instances degeneration of the muscular fibres, with myriads of micrococci.

On August 5, 1886, I was called to visit Mrs. John M. and son Claude, the former aged 42 and the latter 17. They had bought and eaten a lot of dried beef, and in the course of an hour or more were taken violently sick.

Mrs. M. was taken with vomiting and purging; the matters vomited were, after the contents of the stomach were discharged, of a viscid, ropy character. She complained of a nauseous, sweetish taste in the mouth, twitching of the muscles, was badly nauseated, had cold extremities, with vertigo; the tongue was very red, with pulse 120, but no fever.

Claude M. was taken ill very shortly after eating the dried beef, with vomiting and purging, and vomited large quantities of a ropy mucoid substance; had a bad taste in his mouth, cold extremities, tongue red, pulse 100, but no fever.

The treatment in these cases was the same as in the others, with the exception of using small doses of calomel instead of bismuth, on the principal of it being an antiseptic.

I considered both of these cases the result of eating poisonous dried beef; although not quite so severe as the cases of the Ewing family. The young man soon recovered and in a day or so was all right; but Mrs. M. was several days regaining her health, and in fact is still (at the writing of this report) troubled more or less with gastro-intestinal irritation.

I regret very much my inability to procure specimens of this meat.

Remarks.—That the ptomaines or cadaveric alkaloids were the cause of the illness in the above cases is without a question in the case of the Ewing family, and scarcely without a doubt in the last two cases. That there is a poisonous alkaloid which is liable to form in meat, under certain circumstances, has been established without a doubt; but the question of chief importance to the public in general is, when, and under what circumstances, these poisonous ptomaines may and do form, and how to prevent their formation.

When it is remembered that these poisonous alkaloids were first discovered by Selmi in exhumed corpses, the key to the mystery is at our command; chemistry has unlocked the door that led to their once mysterious approach, and has shown their presence to be synchronous with the decomposition of meat of any kind. This being the fact, all tainted meat, from whatever source, should be strenuously avoided; the "shop soured" meat that has spent days on the counter, or in the ice chest, should be shunned, even when cooked and canned, or when made into bologna sausage, or pudding meat, or salted or dried; for it must be remembered that no amount of cooking or curing will remove these poisonous ptomaines from meat in which they have once formed. They are not like the trichina spiralis, or the cysticercus, which can easily be destroyed by thorough cooking.

The commercial process of canning meat in our large cities or packing houses, is another source of these ptomaines; the rapid and slip-shod methods resorted to by the most of these houses, by which meat is turned out upon the market in a few days as cured (but which, in reality, has not been cured sufficiently to prevent its decomposition, and as a result the formation of these poisonous alkaloids), should not only be shunned, but these "near cut" and imperfect methods of curing condemned; and no process of curing and packing meat should be permitted that does not insure the most perfect preserving of the same; and no meat should be put through any preservative process of any kind that is not perfectly healthy, "sweet meat" to begin with, that is not absolutely free from any taint or decomposition.

The detestable habit of working up beeves that have been killed by railway accidents, and have not been bled or dressed for days after being killed, and the wholesale slaughter of "bony old cows" and "unborn calves" and placing them on the market for food, is a disgrace to any country.

MEASUREMENTS FROM SKULLS OF THE SEVENTH CENTURY.

BY C. F. DIGHT, M.D.,

PROFESSOR OF ANATOMY AND PHYSIOLOGY IN THE AMERICAN MEDICAL COLLEGE IN BEIRUT, SYRIA.

During a recent visit to Jerusalem, Palestine, I had an opportunity to examine and take the measurements of a large and rare collection of human skulls, which are stored away in the old monastery of Mar Saba, a distance of three hours' horseback ride down the Kedron Valley, midway between Jerusalem and the Dead Sea. The results of this examination are such as are believed to be of interest, and for this reason I am led to publish them.

These skulls are said to be those of the early Christian monks, who in the fifth and sixth centuries lived in great numbers along this Kedron Valley, as far down as the Dead Sea, and also in and about Jerusalem, who in 614 were massacred by the Persians, when they invaded Syria and Palestine under their leader Chosroes. They are, therefore, Caucasian skulls, and probably those of the ancient Greeks and Romans, which were gathered up and stored here to the number (they say) of 10,000. Such being the size and antiquity of this collection, it can hardly fail of being a valuable one. The great traveler and writer, H. B. Tristram, once on looking at it said: "It is certainly a collection the Anthropological Society might envy, and out of which they might select as many types as it suited their fancy to create."

The measurements which I will give are the only ones, so far as I have been able to ascertain, that have ever been taken of any of these skulls. Omitting as far as possible anatomical terms, the five measurements which I took are as follows:

1. The *horizontal circumference;* learned by measuring with a tape the distance from the middle of the lower part of the forehead around the largest part of the occiput to the starting-point.

2. The *naso-occipital length*, or the distance from just above the root of the nose, back over the top of the head to the external occipital protuberance.

3. *The height*, or the vertical distance from the opening of the ear to the level of the centre of the top of the head.

4. The *width*, or the greatest distance through the head from side to side above the level of the cheek bones.

5. The *cranial capacity*, learned by closing the little openings at the base of the skull, then filling its interior with mustard seeds, which are then poured out and measured in a graduated vessel.

Of the ninety-one skulls which I measured, the largest one gave a horizontal circumference of 22.45 inches (570 millimetres), which is ¾ of an inch above the average for all races. This same skull gave a cranial capacity of 113.6 cubic inches, which is 28.6 cubic inches greater than the average for all races, and 18.1 greater than the average for the Caucasian race (whose cranial capacity exceeds all other races), and but 4.4 cubic inches less than the capacity of Cuvier's skull—the largest on record. Its width was also the greatest, being 6.38 inches (162 mm.).

Its naso-occipital length, 13.39 inches (340 mm.), was reached by but one other, and its height was 4.72 inches (120 mm.).

The smallest of the ninety-one skulls gave the smallest horizontal circumference 18.91 inches (480 mm), and a cranial capacity of 76.6 cubic inches, which is 18.9 cu. in. less than the average Caucasian capacity. Its height was the lowest, being 3.97 inches (101 mm.), its width 5.27 inches (134 mm.), and its naso-occipital length 11.42 inches (290 mm.). All the portions of this brain had been very small.

The one giving the greatest height, 5.2 inches (132 mm.), gave a horizontal circumference of 20.68 inches (525 mm.), width 5.63 inches (143 mm.), and naso-occipital length of 11.85 inches (301 mm.).

The one giving the least width, 4.72 inches (120 mm.), gave a horizontal circumference of 20.48 inches (520 mm.), a naso-occipital length of 12.21 inches (310 mm.), and height of 4.45 inches (113 mm.), being narrow and low, but long from before backwards.

The one giving the shortest naso-occipital length, 8.94 inches (227 mm.), gave a horizontal circumference of 19.7 inches (500 mm.), height 4.37 inches (111 mm.), and width of 4.92 inches (125 mm.).

The average measurements of the ninety-one skulls are found to be as follows:

Average horizontal circum.....	19.98 in. (507.2 mm.).
" height	4.51 in. (114.5 mm.).
" width.....	5.57 in. (141.4 mm.).
" naso-occipital length.....	11.84 in. (300.6 mm.).

The average cranial capacity of the nineteen whose capacities were measured was 91.8 cubic inches.

Comparing the average measurements of these skulls with the *present* average measurements of skulls of the same race (the Caucasian), and if the above measurements are taken as the average of the race at that time (and persons of their rank at that time should have skulls above rather than below the average), it follows:

1. That ours, the Caucasian skull, has, during the past thirteen or fourteen centuries, increased in horizontal circumference 1.72 inches, and to a less extent in height, and not at all in width, and has gained in cranial capacity 3.7 cubic inches.

2. From the fact that our skulls have not gained in width, it follows that this gain in capacity of 3.7 cu. in. is due to increase in their height and length, which, bearing in mind the plan of development of the brain, implies an increase in size of the upper and the anterior parts of the brain—the exact parts which, on *a priori* grounds, we should expect to increase by education and civilization, since these parts of the brain specially preside over the moral and intellectual functions.

3. The lower portions of the brain, being the parts which specially preside over the selfish propensities, or the so-called inferior functions, and which give breadth to the head, being called into activity less as education and civilization advance, have failed to grow as rapidly as other and more exercised portions of the brain; hence the non-increase in width of our skulls.

It need scarcely be said that these were adult skulls, and probably all males, and that among this large collection numerous abnormalities and peculiarities exist—such as absorption and perforation of both tables of the skull from growth and pressure of the Pacchionian bodies; non union of the two halves of the frontal bone in the usual way, leaving a persistent frontal suture; marked difference in size of the two halves of the skull, the left half usually being the larger; and Wormian bones in different localities. A few presented spots which appear sometime to have been burned, and the knife shows these places to be charred. Many of them yet contain a considerable number of teeth, which were sound at death, but are now brittle because of their great age. Others present fractures at different places, and those which are broken open show internal depressions at points corresponding to external elevations, and *vice versâ*, showing that the inside of the skull corresponds in shape to the outside, and that, consequently, the shape of the brain may, as a rule, be determined by the shape of the head, as certainly as the shape of a tree may be known by the shape of the bark which covers it.

POISONOUS ARSENICAL WALL-PAPERS.

Read before the Section for Clinical Medicine, Pathology and Hygiene, of the Suffolk District Medical Society, January 12, 1887.

BY JAMES R. CHADWICK, M.D.,
OF BOSTON, MASS.

In the presence of so many chemical experts and learned general practitioners, it would be presumptuous in me to treat this subject systematically or exhaustively. Moreover, my purpose in opening this discussion is to present, by fresh instances, to the public and profession, the dangers to which every citizen of this commonwealth is exposed by the manufacture and sale of papers for our walls, so charged with arsenic as to produce characteristic symptoms of the poisoning by that mineral in the persons occupying the rooms thus papered. The Legislature of this State, last winter failed to pass a bill prohibiting the use of arsenic in the coloring of wall-papers, so that the only means by which we can save ourselves from this poison, is to disseminate so full an appreciation of our danger throughout the community as to cause every individual to protect himself and his family. This end can only be attained by the publication, by every one who has suffered, of the exact circumstances attending his experience, together with the names of the dealers retailing the papers and the chemists who have analyzed them. This I shall aim to do without animosity to any individual, but with the single purpose of making every one feel more keenly than they now appear to do, the responsibility for the lives and health of our wives, our children, and our families.

In September, 1885, Messrs. J. F. Bumstead & Co. put upon my nursery and one sleeping-room new papers, which they assured me had been analyzed and pronounced free from arsenic. In the nursery slept a boy of 4 years and a nurse, in the chamber slept a girl of 13, in a third room, not then

re-papered, slept two other children. All the children passed several hours of every day in the nursery. During the winter of 1885–86, the boy and nurse remained in good health, the girl of 14, however, suffered much, for the first time in her life, from dyspepsia, colicky pains and headaches; the younger of the two girls had many attacks of palpitation of the heart, lost color and strength; the other girl kept in good health. The symptoms in the two affected girls yielded somewhat, but never fully, to treatment. During the summer of 1886 they regained their health and strength at Mt. Desert; within a month of their return to their homes many of the old symptoms reappeared. About the first of December, the attacks of colicky pains became more severe and frequent in the two affected girls, and were attended by vomiting and diarrhœa.

My attention was then aroused, and I set about to discover a common cause for all these similar symptoms. Having suffered severely in past years from the poisoning of my family by arsenic, I naturally thought of that possibility, and sent samples of the papers most recently put upon the walls (nursery and small chamber) to Professor E. S. Wood for analysis, and received the following reply:

"BOSTON, December 10, 1886.

"The enclosed paper (from the nursery) is very arsenical, I should advise its removal. The other was all right, non-arsenical.

EDWARD S. WOOD."

I was naturally in a state of great indignation that, despite my care, I should have put upon the wall of my nursery a paper which contained a dangerous amount of arsenic. I wrote at once to J. F. Bumstead & Co., asking the name of the chemist who had made the analysis for them. The reply was as follows:

"BOSTON, December 13, 1886.

"DR. JAMES R. CHADWICK:

Dear Sir:—The paper about which you enquire was analyzed by Professor S. P. Sharples, and by him pronounced 'free from arsenic.'

Yours truly,

J. F. BUMSTEAD & CO., *per* HENRY."

It happened that a week previous to this correspondence my wife had taken a friend to the store of J. F. Bumstead & Co., where he had purchased several hundred dollars' worth of papers for a newly-erected house in California. On the same evening I questioned my wife closely as to whether she had been careful to select only papers that were free from arsenic. She said she had insisted upon that point with Mr. Bumstead himself, and had been told that only those papers would be shown her which had been analyzed and pronounced to be free from arsenic. I asked if she had inquired who their chemist was, to which she replied that Mr. Bumstead had told her that their chemist was a Professor Hills. As I knew that this could only be Professor Wm. B. Hills, of the Harvard Medical School, I felt assured that the papers were safe. A week later, however, on discovering that my own paper was arsenical, and feeling responsible for my friend in California, I went to the store of Bumstead & Co., and demanded to see the reports of Professor Hills upon the seventeen papers selected by my friend. I was told to call the next day when they would be shown me. I did so, and then found that all the papers had been, (owing to a misunderstanding) sent to Professer Hills for analysis since my visit the previous day. One of them had been pronounced by him to contain "considerable arsenic," and another a "small amount," both being regarded as more or less dangerous to health. The others were all practically free from arsenic. On asking upon whose certificates the two first mentioned papers had been supplied as "free from arsenic," I was shown the certificates of Prof. S. P. Sharples.

In order to confirm the presence of arsenic in dangerous amount in the three papers about which the reports were conflicting, I have since had each of them analyzed independently by Professor E. S. Wood, Professor W. B. Hills, and Dr. Chas. Harrington, all of the Harvard Medical School, with the result of perfect concurrence as to finding arsenic in dangerous amount.

But little comment is needed on this recital of facts. It is, however, but just to Mr. Bumstead to say that I fully exonerate him from any intent to mislead my wife with regard to the analyst of the papers supplied to my friend. His statement that Professor Hills is now his analyst is true, yet I think I am right in pointing out to him that his reply was so framed as to be misleading, because the papers he was offering for sale had many of them, as is manifest, been analyzed in previous years by other chemists.

I may say, in conclusion, that it makes no difference whether the symptoms manifested by two of my children be adjudged by those present as due to arsenic or not; if I demand papers free from arsenic I ought to be able to obtain them. My own belief is that the symptoms are attributable to that cause, and that the exemption of the nurse and two other children, though in two instances more constantly exposed to the influence, was attributable to the fact that they were less susceptible to the poisonous effects of arsenic. I pass around samples of the papers with the arsenical mirrors obtained by the Berzelius-Marsh test.

I should add that the two affected children have had no symptoms since the paper in my nursery was removed a month ago.

MEDICAL PROGRESS.

HYDRIODATE OF HYOSCINE is recommended by DR. J. MITCHELL BRUCE as being the most convenient salt of the alkaloid for use as a cerebral sedative (*Practitioner*, pp. 321–333). He finds that it is best administered by subcutaneous injection in doses of $\frac{1}{200}$ of a grain. Although it is usually only necessary to give one dose in the evening to secure a quiet night, in cases of high delirium it has been repeated within four or six hours with advantage and safety. If given by the mouth, larger doses are required, as much as $\frac{1}{120}$ to $\frac{1}{90}$, or even $\frac{1}{50}$ of a grain given at bedtime, having proved satisfactory in the hands of Dr. Wetherill, Jr. In America, $\frac{1}{100}$ of a grain has been fixed upon as the average working dose. Mr.

Freeman and Mr Hardy, of Charing Hospital, have, however, come to the conclusion that $\frac{1}{200}$ of a grain of the hydriodate produces most of the benefit that may be expected, without any risk of unpleasant effects. Dr. Bruce confirms the results obtained by previous investigators as to the little value of hyoscine as an anti-hidrotic. On the contrary it frequently produces a distinct increase of perspiration. It does not produce unpleasant dryness of the skin and the throat like atropine. The province of the application of hyoscine is defined by Dr. Bruce to be in combatting urgent symptoms in cases of delirium and to procure quiet and sleep. It must not be expected to cure any disease, although it is true that cases have occurred in which symptoms once controlled by hyoscine have not returned. Sometimes hyoscine gives rise to unpleasant symptoms in connection with the circulation and respiration. Within half an hour after the administration of a full dose ($\frac{1}{100}$ to $\frac{1}{75}$ hypodermically) it may cause failure of respiration in the form of shallow breathing, or even Cheyne-Stokes' rhythm. It has been found, however, by Dr. G. W. Mann, that chloral can neutralize the effects produced by hyoscine. A lady who had taken $\frac{1}{30}$ of a grain of hydrochlorate of hyoscine by mistake, was seized with convulsions, loss of speech, illusions and hallucinations. Chloral in 10 grain doses was given every quarter of an hour until the convulsions had disappeared which took place in less than an hour from the commencement of the treatment. It was then continued in the same dose every hour, but after 90 grains in all had been given, there was no further necessity for its use.—*Provincial Medical Journal*, Jan. 1, 1887.

RARE CASE OF EPILEPSY.—At the meeting of the Medical Society of London, on November 15, 1886, DR. HUGHLINGS JACKSON related the case of a boy, 7 years of age, in whom Epileptic Fts were artificially induced by an unexpected touch on the head. When 3 days old the boy had a convulsion. At the age of 2½ years he had an "ordinary" epileptic fit. Of these latter fits he had four attacks of the same kind, or rather *degree*. Ever since the first so called ordinary epileptic fit some imperfect use of the left arm and leg was noticed, and has ever since remained. About the age of 2½ years the boy began to fall down, but these falls were really fits. He never "fell" unless the head or face were touched, but the fit would not occur if he knew he was going to be touched. Stoppage of respiration was very evident in the fit. The eyes were turned to one side, generally the right. Sometimes as many as fifty falls occurred in one day, and never a day passed without some. Touching any part of the head or face was effective. Several appeared also during sleep when he accidently touched his face or head. These sudden inopportune falls had caused enlargement of the left frontal eminence, and also that of the right side. The left arm was slightly less in circumference, and its movements were clumsy; there was something like athetosis in the left hand when the right hand was engaged in drawing or writing. He limped with the left leg, which was also less in circumference than the right. There was no alteration in the knee-jerks, and no ankle clonus. Perhaps the left side of the head was more sensitive, but no one place could be made out to be more sensitive than another. At times the boy said his left arm felt "heavy." The fits were not opisthotonic, as happened in feigned fits. Dr. Jackson described three forms of epilepsy —(1) epilepsy proper; (2) epileptiform seizures; (3) due to nervous discharges in the pons Varolii or medulla oblongata. In the case above there was a local lesion somewhere, as the hemiplegia showed. The epileptogenous zone was less defined than occurred in Brown-Séquard's guinea-pigs. Nervous discharge in some part of the pons was the probable cause of the falls or fits.—*Lancet*, Nov. 20, 1886.

PELLETIERINE IN INFANTILE DISORDERS.—M. F. MÉPLAIN, bearing in mind the difficulty of giving children vermifuge medicine in sufficient doses, and the fact that Dr. Bétancés had administered 6 centigrammes of pelletierine, which had expelled a tænia, resolved to try this remedy on an infant 32 months old, which was suffering from convulsions. M. Béranger Féraud and other writers recommend that pelletierine should not be given to children, on account of the symptoms of congestion of the brain, which it occasionally causes in adults. Be that as it may, M. F. Méplain administered to his little patient a large teaspoonful of solution of Tanret's pelletierine, which represents about 6 centigrammes of the alkaloid; twenty minutes later, 20 grammes of manna, dissolved in a cup of milk, were given. The expulsion was tardy, owing to the insufficiency of the purgatives used, but was, nevertheless, complete. M. F. Méplain, who remained several hours with the patient, observed no alarming symptom. From the observations of MM. Bétancés and F. Méplain, it appears, therefore, that whilst a small dose of pelletierine is sufficient to expel the tænia, the use of the drug is, in the case of children, unattended with the risks which might have been expected from its physiological action, and from the effects observed in adults.—*British Medical Journal*, Jan. 1, 1887.

DENTAL ANÆSTHESIA.—M. GEORGES VIAN claims to have solved the problem of local anæsthesia in dentistry. After numerous trials of solutions of different strengths, he has found that the soft parts about the maxillæ may be rendered completely insensible by the use of cocaine, associated with a 2 per cent. solution of carbolic acid. Five minutes before operating M. Vian dissolves 5 centigrammes (1 grain) of hydrochlorate of cocaine in 50 centigrammes (10 drops) of the solution, and injects it into the gums, half-way between the neck and the extremity of the root of the tooth. Half of the solution is injected on the palatine and the remainder on the labial side, pressure being made by the finger, when the needle is withdrawn, to prevent the exit of the fluid. Anæsthesia is perfect in three minutes. The quantity of cocaine advised by M. Vian seems somewhat large, but it is said to have been so used in eighty-seven cases without causing any unpleasant symptoms.—*Medical Record*, Jan. 15, 1887.

THE
Journal of the American Medical Association.
PUBLISHED WEEKLY.

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, FEBRUARY 19, 1887.

THE MARINE HOSPITAL SERVICE.

There is much of general medical interest in the recently received "Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States for the Fiscal Year 1886." There are many medical men and health officers who do not seem to have yet seen the necessity or good of this Service—and this, we think, may be attributed to a want of information as to the duties required of and performed by the Service.

During the last fiscal year the number of patients relieved by the Service was 43,822; number treated in hospitals 12,624; number treated in dispensaries 31,198; and days' relief in hospital furnished 316,205. Previous to October, 1885, the Service was supported by a tax upon the beneficiaries, and it was held that only those who contributed to the fund could receive relief from it; but after the enactment of the law providing for the support of the Service from the tonnage tax, it was claimed that fishermen, whose vessels paid tonnage tax, became contributors to the fund; and it was decided by the Solicitor of the Treasury that seamen employed on vessels licensed for the fisheries are entitled to the benefit of the Service. By a calculation based on the receipts from all sources (including special appropriations) it will be found that the average cost of each patient relieved during the year, supposing that all the funds were expended, was a trifle over $12. Even at the present low rate of tonnage tax, the tax alone is sufficient to support the necessary *general* expenses of the Service with the exception of the amount necessary for fuel, light and water. Of course special appropriations are required from time to time for extraordinary alterations and repairs for the older hospitals. In the long run the expenses would probably be reduced if the recommendation of General Hamilton regarding a laboratory and warehouse were carried out; for it would undoubtedly be cheaper to manufacture many of the drugs now in use than to buy them; and with ample store-room articles which cannot now be kept in stock could be purchased at better rates, and be subject to more thorough inspection. Certainly, all non-perishable articles needed for use in the hospitals should be kept in stock.

Of the hospitals, the one at Baltimore will probably be occupied this winter; the one at Boston is in bad repair, especially with regard to the heating apparatus; and the one at Chicago is probably in a worse condition. The hospital at Detroit is too small, and that this is a very important station was shown during the small-pox epidemic in Montreal little more than a year ago. The hospitals at Key West and New Orleans, each a very important station, are sadly in need of repairs. The Government does not own a hospital at New York, but the necessity for one is without question. An appropriation of $250,000 has been asked for to enable the Secretary of the Treasury to purchase a site and erect a suitable hospital, (and we have gained the impression in some way that the site has been purchased). The hospital at Wilmington, N. C., is also too small, and during the last year it was so crowded that the attendants had to be lodged in the cupola. It is recommended that quarters for the medical officers be constructed outside of the building. The other hospitals are generally, with the exception of minor repairs needed, in good condition.

Although there were no epidemic diseases imported into the United States during the last fiscal year, the country was threatened from various sources, especially from cholera in Europe and small-pox in Canada. Against the introduction of these diseases the Service did some very efficient work, as will be seen from the "Report." General Hamilton says, and it is a matter which has long been discussed, and needs still further ventilation, that a more stringent law should be made regarding hospital and other accommodations of the steerage on merchant passenger ships. The berth decks are badly ventilated, and in many cases there is an absence of light. These ships also need better medical attendance, and laws should be made which will give the medical officers some voice in matters relating to their position and duties. At present the medical officers are not subjected to examinations as

to qualifications, and in some cases they have to perform the duties of *purser* in addition to those of the medical attendant. "That portion of the quarantine act requiring the publication of weekly abstracts of sanitary reports, etc., has not been carried into effect of late years, the force of this office being inadequate for the performance of the duty. The detail of an additional officer to act as registrar of vital statistics would fulfil the requirements, at a minimum expense. These reports are very much sought after by State and local boards of health, and were the publications resumed it would be of great service to them." Since this was written these abstracts have appeared with an irregular regularity.

Hitherto the annual reports have mentioned the necessity for providing for old, decrepit, and worn-out seamen, and those suffering from incurable affections. This would prevent the over-crowding of the hospitals to some extent, and concentrate these seamen in one place, where they could be better cared for. It is recommended that a "National Snug Harbor" be established in the District of Columbia, which would also serve as the headquarters of the Service, and of the purveying division, laboratory, etc. The approximate cost of this establishment would be $155.000.

THE INDUCTION BALANCE AND TELEPHONIC PROBE.

At a recent meeting of the New York Academy of Medicine DR. JOHN H. GIRDNER gave an interesting demonstration of the detection and locating of metallic masses imbedded in the human body, by means of the *induction balance* and the *telephonic probe*. As is well known, this apparatus is the invention of Professor Alexander Graham Bell, of Washington, and the method was suggested in the summer of 1881, in connection with the case of the late President Garfield. It will be remembered that an attempt was then made to locate the ball in the President's body by means of the induction balance; but on account of the crudity of the apparatus, the lack of experience in its use, and, more than all, to the disturbing influence of a large steel mattrass on which the patient lay—the existence of which was unknown at the time of the attempt—the result was anything but satisfactory.

In working the apparatus a bichromate of potassium battery of six cells is employed; and an interrupted current with about six hundred interruptions to the minute has been found to be most satisfactory. For the induction balance two circles of electric influence are required: one, the primary, directly connected with the battery; and the other, the secondary or induced, with a telephonic receiver. In each there are two coils of No. 25 wire, one of which is twice the size of the other; the larger coils being designated as "exploring coils," and the smaller as "adjusting coils." The former, which are simply laid one upon the other, are secured to a large disc of wood, provided with a handle, which is called the "explorer," and which is to be moved over the surface of the body in the locality where the metallic mass is supposed to be lodged, while the "receiver" of the instrument is held to the ear of the operator.

When no metallic body is in the vicinity of the "explorer" no sound whatever is heard through the "receiver;" but when the "explorer" is brought near any metallic mass the presence of the latter is indicated by the sound heard in the "receiver." This sound increased in intensity as the "explorer" approaches nearer and nearer the mass, and the greatest intensity of sound is, of course, reached when the centre of the "explorer" is at the nearest possible point to the metallic mass. Fortunately for the successful application of the apparatus, experiment has shown that living tissue is the best conductor of the sound.

In the telephonic probe a telephonic receiver is brought into connection with an ordinary piece of steel upon the external surface of the body, and also with a long needle which is to be inserted into the flesh at the point indicated by the explorer of the induction balance, as that at which the sound in the telephonic receiver of the latter is most distinct. As soon as the point of the needle comes in contact with the metallic mass a sharp "click" is heard in the receiver; and the special value of the telephonic probe lies in the fact that this "click" is never heard when the needle comes in contact with bone or other non-metallic substance. At the meeting at which the instrument was described and exhibited, its practical working was shown by the detection of the location of a mass of lead in a piece of beef. It was also shown to some extent by the detection of the location of a ball in the chest of a gentleman who was wounded in the late war; but the gentleman respectfully, though firmly, refused to allow the telephonic probe to be used. The induction balance showed that the bullet was about the junction of the clavicle with the sternum. It seems, however, that the practical working of the instrument might be easily demonstrated beyond doubt by experiments upon anæsthetized dogs by shooting them and then locating and extracting the bullet.

THE LIGHTING AND HEATING OF RAILWAY CARS.

The recent disaster on the Vermont Central Railway, and others which have but lately occurred on other roads, seem sufficient ground for again calling attention to the dangerous methods of heating and lighting of railway passenger cars, especially since of the 300 lives already lost in railway accidents in this country this year about one-half have been caused by fires originating from the stoves and kerosene lamps with which the cars are heated and lighted. In a few States the State Boards of Health have undertaken systematic sanitary inspection of passenger cars, and it would be well if the Boards would set this matter before the legislatures in the strongest possible light; since it is clearly within the province of a State Board of Health to take cognizance of such matters—certainly as much as the disinfection of closets, water supply, means for rescuing passengers from wrecks, etc. In Dakota a bill has been presented to the legislature, and we are informed that it will most probably pass, which declares that a fire in a railway car is a "culpable negligence," and renders the road liable to the survivors of the person burned in the sum of $10,000 damages; and in the Illinois Legislature two bills have been introduced—the one requiring railway companies to use some other method than stoves for heating cars, and the other providing that a chemical fire-extinguisher shall be kept at each end of the car, or, in lieu of them, three hand fire-extinguishers.

It has been shown on the Connecticut River Valley Railway and on the elevated roads in New York City, that cars may be efficiently and satisfactorily heated by steam, without fire of any kind in the cars, and without danger to the passengers by breakage or disconnection. On the elevated roads in New York each car contains pipes in which is a quantity of soda solution, which is heated by steam from the engine; this solution being used because it stores more heat than any other available solution.

In the matter of lighting cars, it is now practicable to use the incandescent electric light, which is in partial use on the Pennsylvania Railway and on some of the cars of the Boston and Albany Road. Even gas, which has been used for several years on some of the roads, is much more safe than kerosene lamps. There may be said to be no danger whatever from the incandescent light, for any accident which breaks the glass bulbs at once extinguishes the light.

It is also within the province of the supervisors of public health to recommend that wooden bridges shall be superseded by iron bridges with a guard-rail (such as is in use on the New York elevated railways)—a high rail on the outside of the track-rail on each side, which prevents cars leaving the track even if derailed.

A CLASSICAL PATIENT.

The following message (?) was left on the slate of a Boston physician:

οἱ ἀναγκαῖοι ἐμὲ χρήζουσιν οἰκαδε ἰέναι.

The physician, in writing to the *Boston Medical and Surgical Journal*, claims that his inability to translate the line "shows the necessity of requiring Greek" (in the colleges). To us it only shows that the patient should have been taught to express his wants in English.

Doubtless one or two dozen translations of the line (no two alike) have been sent in by lovers of the classics residing even under the shadows of Harvard and the Bunker Hill monument. It is, then, perhaps too late for us to venture a translation, and it would be presumption extraordinary for those who do not see the necessity of requiring Greek, and who are somewhat out towards the periphery of the universe, to do more than offer a diagnosis of the patient's malady. If the patient cannot write English it is scarcely probable that his tongue has no mastery of the words immortalized by Dr. Noah Webster, not to mention other lexicographers. We may therefore imagine the dismay and confusion of face of our enquiring *confrère* when the patient returns, finds him in his office, and begins to describe his symptoms in the native tongue of Aristotle, which has been more recently brought prominently before the public by Prof. Anthony and Mr. Charles Francis Adams. There is, of course, a possibility that the person who left the inscription on the slate was a Boston blacksmith who called to collect a bill. It is equally possible that what was written was not Greek at all, but a prescription written by a prominent consultant while thinking of something else. But, on the assumption that the perpetrator of the outrage was a patient, we venture the diagnosis of *Anglo-agraphic aphasia*, and would recommend a writing master and a school dictionary.

CHOLERA IN SOUTH AMERICA.—From the latest weekly abstract of sanitary reports, issued from the office of the Supervising Surgeon-General of the U. S. Marine Hospital Service, Feb. 3, 1887, it appears that the cholera epidemic is steadily spreading to new places in the Argentine Republic, regardless of both quarantines and military cordons.

PROPOSED AMENDMENTS TO THE LAW REGULATING THE PRACTICE OF MEDICINE IN ILLINOIS.

A few weeks since we called attention to the very imperfect returns of births and deaths in this State, as shown in the last general report of the Illinois State Board of Health, caused by the neglect of physicians in reporting cases as required by the law. Some amendments to the law designed to aid in securing more complete returns in future have been presented in the State Legislature, now in session, and we trust they will receive early and favorable consideration.

If the State will furnish the members of the profession in every town convenient blank certificates, both for births and deaths, and annually publish the results in a form accessible for convenient study or reference, most certainly the physicians should be willing to fill the blanks and promptly mail them to the proper town or county officer. Correct vital statistics relating to the population of any town, county or State, constitute necessary factors in the study of etiology and the results of various measures for sanitary improvements. As every physician has a personal interest in whatever will advance any department of the science and art of medicine, he ought to coöperate cheerfully and promptly in securing full and reliable statistics of births and deaths, so long as the published results return *free* in the form of reports from the Health Board of the State, tabulated and associated with much additional valuable matter, all arranged convenient for use.

ANOTHER DEATH FROM CHLOROFORM.—According to the daily press, during the surgical clinic of Professor Wm. H. Pancoast in the Medico-Chirurgical Hospital, Philadelphia, February 9, 1887, a patient, male, aged 30 years, presented himself on account of false anchylosis of the proximal joints of the thumb and index finger resulting from previous injury. On attempting to forcibly restore motion the patient complained so much, that the professor ordered him a few inhalations of chloroform, and while he was still sensible enough to voluntarily hold up his hand, the professor took it, quickly flexed the joints freely, and removed the napkin in which had been placed at the beginning only "half a teaspoonful of chloroform," but respiration had ceased. The statement gives the whole time during which the chloroform had been administered as "only four minutes;" and that from a napkin admitting free intermixture of air. The most active and persevering efforts failed to resuscitate him. The post-mortem examination revealed much disease of the kidneys, and fatty degeneration of the liver and muscular structure of the heart.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, January 17, 1887.

THE PRESIDENT, EDMUND J. DOERING, M.D., IN THE CHAIR.

DR. LYMAN WARE read a paper entitled

A CLINICAL STUDY OF GLAUCOMA.

The author briefly referred to the history, pathology and etiology of glaucoma, and expressed his belief in the curative power of von Graefe's operation of iridectomy. Unmistakable symptoms of glaucoma are supraorbital and ciliary neuralgia, increased ocular tension, periodic diminution of vision, the appearance of a halo around artificial lights, a sluggish and widely dilated pupil and a shallow anterior chamber. Although increased tension may be associated with other diseases of the eye, its presence should always lead to a critical examination. Several cases were detailed: Mrs. M., aged 50, while riding in an open street-car, contracted a severe cold, which was followed by neuralgia over both eyes. The pain was so intense that at times she was delirious. Her weight was reduced from 110 to 80 pounds. She became entirely blind. On account of the eye being small and deeply set and the anterior chamber very shallow, sclerotomy was advised and performed. This gave immediate relief, but the pain returned again in a few days. When Dr. Ware saw the case the anterior chamber was almost obliterated, the glaucomatous lens pressed the iris forward until it came in contact with the cornea. With a von Graefe cataract knife a free sclero-corneal incision was made and a portion of the iris excised, and the lens removed from both eyes. The pain greatly subsided, but the sight was irrecoverably lost. Another case was a man æt. 52 years, who complained of having had pain in and over the left eye for five or six months, and had seen the halo about street lights. On examination tension was found increased, vision diminished one-half. Some months later iridectomy was performed, and a solution of eserine (4 grs. to the oz.) instilled every four hours into the other eye. Pain was at once relieved and all symptoms of glaucoma rapidly disappeared. Mrs. M., aged 45, had frequent attacks of neuralgia and noticed defective vision in the left eye six months before coming under observation. Tension was found much increased; she had seen halo about artificial lights for eight or ten months. Distant objects could be clearly perceived by right eye. Iridectomy was performed on the left eye with a view of abating the

pain and preserving the vision of the right eye. The relief from pain was great, vision of right eye fully restored and left eye much improved.

DR. E. E. HOLMES reported

A CASE OF FOREIGN BODY IN THE ANTERIOR CHAMBER.

This case was of special interest to me on account of the difficult diagnosis and the difficulty attending the removal of the foreign body. The doubt regarding the diagnosis arose from the fact that there was a small central perforation of the cornea. Below this, and not connected with it, was a fine greyish line extending downward and inward (R. eye), apparently in the substance of the cornea, fairly into the angle of the iris and cornea. This resembled the channels left after the removal of fine slivers of grain stalk which are sometimes thrown into the cornea obliquely from threshing-machines. The patient explained the accident as follows: He was setting a machine punch so the punch would accurately fit the die. The power was applied, when the punch did not accurately correspond to the die. At the same instant something entered the patient's eye. He came to my house twenty-four hours after the accident with the eye slightly red, but not painful. I prescribed atropine and sent him to the hospital. The next morning the pupil was round and fully dilated. The media were all clear. I felt great anxiety in regard to the case, but inasmuch as during five days there were no symptoms of inflammation along the supposed track in the cornea, I finally became convinced that there was a fine splinter in the anterior chamber, in close contact with the cornea.

I made quite a long incision through the lower border of the cornea, the knife touching and moving the piece of steel. I endeavored by means of a fine forceps to seize the lower part of the steel and disengage the point from the tissues at the angle of the iris and cornea by carrying the steel farther towards the pupil. This was found to be impracticable, since the lower end of the piece was firmly held by the tissues. I used all the violence I considered warrantable. As the anterior chamber was without aqueous humor, there was some difficulty in further procedure without violence to the lens or iris. I consequently extended the wound in the cornea upward so the upper end would correspond with the upper end of the steel. This end was easily seized and with considerable force withdrawn. The splinter was three-sixteenths of an inch in length. Eserine at first, then atropine with antiseptic dressings were applied with great care. There was no reaction, the patient recovering perfect sight, except as far as there was dimness from the central cicatrix in the cornea. Vision was good five weeks after the patient had returned home. I must confess the almost V-shaped incision in the lower border of the cornea did not please me.

DR. HOLMES also reported

A CASE OF INTRA-OCULAR TUMOR.

This tumor, filling the sclerotic, is a sarcoma of the choroid. The patient, a man 62 years of age, had been under the observation of several specialists during the past year, but could not give me a definite expression of their opinion. When he came to me, a few days ago, the cornea was perforated and presented a staphylomatous projection of the growth. For a year there has been pain and for the last six months very great pain. The tissues of the orbit around the globe were greatly swollen, but not indurated. In enucleating the eye I expected to find the sclerotic destroyed posteriorly and the orbital tissues invaded. The enucleation, however, was performed as easily as in ordinary cases. The optic nerve is seen to be enlarged several millimetres behind the sclerotic. The swelling in the orbit was caused by nodules of fat filled with numerous blood-vessels. Dr. Ochsner pronounces the tumor to be a small round-celled sarcoma with very little pigment. The nodules of fat are free from sarcoma cells. This class of tumors, if removed early, are not very liable to return in the orbit. They may, however, reappear, especially in the liver or other internal organs. They must, consequently, be regarded as quite malignant.

DR. BOERNE BETTMAN read a paper on the

CONNECTION BETWEEN OCULAR AND NASAL DISEASES.

The author thought that numerous pathological conditions of the eyes and lids are attributable to abnormal changes in the nose, and that in these cases treatment of the ocular organs alone will fail to alleviate the trouble. After referring to Hack's monograph on the subject, Dr. Bettman detailed several cases in substantiation of his theory: A boy of 10 applied for treatment of epiphora of both eyes. The eyes were constantly weeping. An examination of the nose revealed an extensive swelling of the anterior portion of both turbinated bones. When these parts were touched with the probe profuse lachrymation was induced, and a light thrown into the eye by means of the ophthalmoscope produced violent sneezing. A deep incision was made in the swelling with a knife electrode, and a flat burner was also employed. The slough was completely thrown off in fourteen days and the boy cured in one month, the eyes receiving no treatment. Polypi of the nose have been found to produce secondary affections of the eye: Hermann S. was prevented from following his trade of a cabinetmaker on account of the excessive flow of tears; he also complained of pain in the eyes. Polypi were removed from the middle turbinated bone with the Jarvis snare and a cure effected. E. B., aged 16, was extremely sensitive to light and the eyes were both bathed in tears. Each time the eyes were exposed to a glare of light she sneezed violently. There was Hack's swelling in both nostrils. Two pledgets of cotton were soaked in a 5 per cent. solution of cocaine and allowed to remain five minutes at a time. There was an immediate effect, and in three-quarters of an hour she was able to bear the light. The patient refused cauterization and employs cocaine to avert photophobia. The majority of cases coming under Dr. Bettman's observation have been treated by applications of the galvano-cautery to the nasal membrane. The applications restricted to the anterior end of the turbinated bone frequently fail to give relief. It has been found that a sensitive area

exists at the posterior end of the inferior turbinated bone and also at the anterior part of the nasal cavity, in the angle forming the boundary of the vestibule. In conclusion, the author thought oculists should always subject the nose to a thorough examination when seeking the source of ocular complaints.

DR. H. M. STARKEY read a paper entitled

SOME MODIFICATIONS IN THE TREATMENT OF STRICTURE OF THE NASAL DUCT.

The author said that about 1883 the Western Suppository Co. made a lachrymal bougie of medicated gelatine of such elasticity that it could easily be passed into the nasal duct. It was less painful than a metal probe, and its slow solubility kept the mucous membrane at the point of stricture distended so that it could be acted upon by the medicine from thirty to sixty minutes. He thought results showed the use of electrolysis in these cases to be often unsatisfactory. The object to be attained is to restore the diseased parts to as nearly a normal condition as possible, and the most satisfactory treatment is by using injections more and probing less frequently. The author determined to try the effect of probing the punctum without slitting the canaliculus, followed by astringent injections over the inflamed surface. This treatment proved entirely satisfactory, and in about five weeks a patient went to his home in another State with apparently perfect recovery, and no destruction of tissue.

The following case was given as illustrating the author's method of treatment: Mrs. L. suffered from lachrymation of each eye for two years. There was severe lachrymal conjunctivitis of the right eye, the punctum being contracted one-half. On dilating the right punctum a No. 2 probe could be passed without difficulty, but the whole interior of the nasal duct had the peculiar velvety feeling that is caused by thick villous mucous membrane. The same condition, in less degree, was found on the left side. Treatment was commenced by applying a weak astringent and washing out the lachrymal canals thoroughly each day with boric acid lotion, followed by a weak astringent. Once a week a probe was passed through the dilated punctum down to the naris, using a larger probe each time until No. 7 was reached. The result was satisfactory, and in six weeks the patient returned home apparently well.

DR. W. FRANKLIN COLEMAN read a paper on

SYMPATHETIC OPHTHALMIA.

Disease in the sympathetic eye generally occurs when there has been a wound or operation in the dangerous zone of the diseased eye. Becker, in 1875, collected twenty-two cases of sympathetic ophthalmia from cataract operations, foreign bodies lodging in the eye, and degeneration of a lost eye, or other causes. Dr. Coleman read in detail the clinical history of the disease, and enumerated the causes, histories and results of the treatment of a large number of cases. In regard to treatment he advised as per the following:

CONDITION DISEASED EYE.	CONDITION SYMPATHETIC EYE.	TREATMENT.
Blindness.	Normal.	Enucleation in unintelligent and children.
Blindness.	Sympathetic irritation.	Enucleate.
Blindness.	Sympathetic inflammation	Enucleation not often advisable.
More or less vision	Normal.	Do not enucleate generally.
More or less vision	Sympathetic irritation.	Better enucleate.
More or less vision	Sympathetic inflammation	Do not enucleate.
Acute ophthalmitis	Normal.	Never enucleate.
Acute ophthalmitis	Sympathetic irritation.	Puncture and foment diseased eye, then enucleate.
Acute ophthalmitis	Sympathetic ophthalmitis.	Treat ophthalmitis, and then enucleate.

DR. F. C. HOTZ said: I think the theory of the author in regard to the closing of Schlemm's canal and the approximation of the iris to the cornea interfering with filtration cannot account for glaucoma. Pathological anatomy has so far failed to find the cause, and we have to rely on clinical studies to build up a theory which will account not for the late stage, the fully developed glaucoma, where the sight of the eye has been permanently destroyed by the disease, and which the pathologist gets from the oculist after enucleation, but for the first stage, the premonitory symptoms before it becomes an acute attack; a stage which the pathologist has not yet investigated with his microscope. At that stage who can say certainly what glaucoma is? It is probable that various causes lead to the same result. I believe that the agglutination of the iris to the cornea, the compression of Schlemm's canal or any other part of the eye, are consequences, and not primary causes of glaucoma. I was somewhat surprised that, in a paper addressed to general practioners, the author attached so little importance to the clinical symptoms in glaucoma, of a general character, such as gastric and febrile disturbances in connection with hemicranic headache. These symptoms often cause the practitioner to fail to discover glaucoma. I can recall a number of such instances. Last October a lady came under my care who had been under the treatment of a physician for four or five weeks for malarial fever and dyspepsia, which was the beginning of an undoubtedly characteristic and typical attack of glaucoma. But the attending physician's attention was attracted by the coated tongue, the nausea, vomiting, severe headache and excited pulse, and he treated the patient for these daily attacks of headache, which he diagnosticated malaria, and used antiperiodic remedies, utterly disregarding the condition of the eye, although the sight was at first nearly extinguished, and only returned to a certain extent after the attack lost somewhat its severity. Another case: A poor woman lost one eye from glaucoma ten years before; the eye was blind and hard, showing the characteristic state of an eye in which glaucoma had run its course. She was attacked by a severe pain in the head extending over the left side, could not sleep for several weeks, was nauseated, vomited, and showed symptoms of some general disturbance. The physician

treated her for the stomach trouble and headache, and although she told him time and again that her sight was getting poor, and suggested that an oculist had better examine her eye, he paid no attention to this, and the result was that two months after this attack the sight was entirely gone and could not be restored. In still another case both eyes were neglected until the patient could perceive only a little flicker of light, before it was considered necessary by the attending physicians to pay any attention to the eyes. Dyspepsia, gastric fever, malaria, and sick headache were the diagnoses, and the treatment was in accordance. I think it is well to bring out these points, and to call the attention of every physician to the fact that such attacks sometimes mean something more serious than a disturbance of the stomach, and that when the patient, during such attacks, speaks of the eyes as being troublesome, or the sight as becoming dim, it is worth while to pay attention to it, and to remember that acute glaucoma is often ushered in with these general constitutional symptoms.

Dr. Lyman Ware said: I have only a word to say about the disturbance of the equilibrium of secretion and excretion. It has been fully demonstrated that it is only by restoring the equilibrium that sight is saved. I quite agree with Dr. Hotz regarding febrile symptoms, but it is my experience that they are *secondary* rather than *primary*.

Dr. Henry Gradle said: The cases which Dr. Bettman presented are of great interest from the fact that they have only lately been recognized. Dr. Gruening, of New York, was the first to point out that there existed affections apparently of the eye, but which in reality originated from the nose. I have watched for these cases ever since Gruening's paper first appeared, and would say that the cases in which the nasal trouble is *entirely* the cause of eye disease are not very frequent. But I have seen instances where affections of the eye were certainly complicated by nasal trouble, and the nasal trouble prolonged the eye disease. I recollect a number of cases of eye disease either kept up or originated by nasal trouble. The first of these is a pseudo-erysipelas of the lids, which is not an infectious disease, but merely a secondary affection of the blood-vessels, only resembling erysipelas clinically. It is entirely due to irritation and engorgement of the blood-vessels in the front part of the inferior turbinated bone. A second type of nasal affection giving rise to eye trouble is true periodical hay fever, and a non-periodical irritability of the nose, resembling hay fever. I have published four cases, and have since seen another, of periodic conjunctivitis characterized by the formation of granules and follicles, which trouble always receded in winter, to reappear again in the spring or summer. In two of these cases a diagnosis of hay fever has since been made. I have seen a case which had been treated for trachoma by a number of specialists, where the history of the nose showed that the affection was of nasal origin. The same trouble may exist in a non-periodic form, and present all the symptoms of hay fever, the trouble not being limited to any season, but occurring in any part of the year, lasting a few days or weeks. But these cases are not common. In one of these cases I was able to effect a complete cure by cauterization of the nose. A third type of nasal affection giving rise to ocular symptoms is true catarrh of the upper and front part of the mucous membrane of the nose, where the membrane is distinctly reddened and where there are generally slight and by no means prominent symptoms of catarrh. In these cases I have very frequently found troublesome epiphora without any stricture of the duct; in some cases the test was made by using delicate probes. Such cases, I can testify from my own experience, are entirely curable by simple treatment of the nose. I have found a not sharply defined case of astheropia, due not entirely to the nose, but complicated with refractive trouble, where nasal treatment was necessary to complete a cure. Once or twice I have seen polypi play the same rôle, and a number of times I have found the starting-point of the irritation not in the front of the nose, but in the posterior part, in the form of the common adenoid vegetations.

This is a subject which has not been fully dealt with in literature, but I have several cases where the extirpation of the large post nasal tonsil has given decided relief to the eye. Then I have found that in a few cases ulcers or chronic inflammation of the cornea were kept up by nasal trouble, which was probably started in the first place by a copious flow of tears from the eye. I have observed that local treatment by means of calomel, atropia, and the customary applications to the eye, proved inefficient, while the addition of nasal treatment hastened the cure of some of these tedious cases. The nose was probably normal to start with, but the continued flow of tears produced either small erosions or some little catarrhal troubles of the mucous membrane at the front of the nose, subsequently increased to chronic catarrh, leading to congestive obstruction of the tear passages, or exerting an unfavorable nervous influence upon the eye trouble. Finally, as a rare instance, I will mention one case which is now cured. The patient was sent to me for polypi, which, however, proved to be the minor trouble in the nose, the real trouble being an immense vascular tumor occupying the entire floor of the right side of the nose, covering the inferior turbinated bone and reaching about to the middle turbinated bone. The patient had been reduced in strength, and the slightest exertion on his part produced hæmorrhage, therefore the most careful operative procedure was necessary. I finally succeeded in removing the entire tumor by the galvano-cautery in twenty sittings. As the tumor began to shrink the hæmorrhage was less, but he lost thirty or forty ounces of blood in six weeks. During the latter part of the treatment his right eye began to bulge, and he complained of double sight. It has remained healthy, but there was an unmistakable development of vascular tissue in the orbit and behind the eye, which receded by the time the tumor had been extirpated from the nose.

Dr. Boerne Bettman said: I was very glad to hear Dr. Gradle corroborate my statements. I am well aware that these cases are comparatively rare; although I have recorded in my case book about

twenty, seen during the last two years. I am acquainted with the article published by Gruening. My attention was first called to the subject by the work of Hack, and since reading that I have made it a point never to allow an eye patient to leave my office until his nose has received a very thorough examination. I have seen a number of cases such as mentioned by Dr. Gradle, but I thought it better to describe to-night only the typical ones. The connection between ocular and nasal troubles is a point all oculists should bear in mind, and when they find no local cause for epiphora they should examine the nose.

DR. A. P. GILMORE said: I would like to add one word in regard to glaucoma, and that is, the importance of tension does not seem to me to have been sufficiently dwelt upon. Any careful general practitioner can ascertain whether the tension is increased or not, simply by comparison with the tension of his own eye. All pain referred to the eyeball, with or without the accompanying neurotic symptoms mentioned in the paper, does not mean glaucoma. Unless there is increased tension you cannot diagnosticate glaucoma. The author does not mention Badal's operation in the treatment of glaucoma. It is certainly entitled to a place among the operative measures. I will only speak of one point in Dr. Starkey's paper, viz.: epiphora. I do not believe, with many, that epiphora is due primarily to a stricture which prevents the escape through the nose of the natural amount of fluid secreted, but is due rather to reflex irritation causing an hypersecretion of tears. In health the eye is moistened with a moderate secretion. When the lachrymal gland is removed the eye continues to be moist and the cornea retains its lustre. Tears are not essential to the lubrication of the eyeball; their function is to protect the eye against foreign bodies. A bit of dust under the lids will cause profuse lachrymation and the tears will flow over the face, not because of an obstruction to the natural amount of fluid secreted through the natural passage, but because of a hypersecretion due to reflex irritation. For treatment I never use a probe larger than Bowman's No. 6, usually No. 4. I seldom find it necessary to make Bowman's operation in epiphora. I think its use is unnecessarily frequent. I use astringent and antiseptic solutions with a syringe small enough to be easily introduced into the puncture when slightly dilated. I am very careful to treat any nasal complications; it is impossible to treat diseases of the eye successfully without recognizing and treating reflex irritations of the nose.

DR. STARKEY said: My paper was necessarily cut down very much. As first written I had given some space and attention to cases similar to those mentioned by Dr. Bettman. I had also spoken of the probability that in many cases of epiphora, where there had been inflammation of the tissues lining the lachrymal canals with partial closure, a continual irritation of the canal in some way, perhaps reflexly, so stimulates the lachrymal gland that the tears are poured forth more abundantly. There are well-known cases where the lachrymal canals have been completely closed by injury or operation, and yet lachrymation is not annoying, although the gland has not been extirpated; tending to show, as mentioned by Dr. Gilmore, that the normal secretion of tears is ordinarily very limited. It seems to me that in many instances lachrymation is due to irritation propagated reflexly, and therefore in treating such cases I thought of trying to restore the mucous membrane of the lachrymal canals to the normal condition, as well as to look for and treat points of irritation elsewhere.

DR. J. E. COLBURN said: In cases of injury where there is danger of sympathetic irritation, a foreign body being lodged in the anterior chamber, iris, ciliary body, or the choroid, where the chances are that in order to give all the advantages of treatment the patient must necessarily be idle for a considerable length of time, and where the sight in the injured eye has been irretrievably lost, I think it advisable to make the operation of evisceration or abscission as early as possible. The patient, if a laboring man, is then relieved from a long enforced idleness and anxiety, and the danger that lack of care frequently causes in this class of cases. Where the appearance is first to be considered, and the patient can be constantly under observation, the operation can be postponed, but with the strict injunction the patient is to be under constant surveillance. In a large majority of cases where there is great damage done and the foreign body is out of sight, it is safe and advisable to make the operation, trusting to that to save the other eye. In a case that came under my observation recently a piece of steel entered the anterior chamber near the centre of the cornea, passed through the iris and lodged in the sclera. No operation was performed, and the fellow eye became sympathetically affected, and on account of its sympathetic disturbance had to be removed. The steel produced some local irritation, and the eye was caught and rolled strongly toward the nasal canthus, and the piece of steel was found projecting into the orbit from the sclera and was removed. The track of the steel through the sclera was surrounded by a large mass of fatty degeneration, which was also removed. Vision remained about one-half.

DR. W. FRANKLIN COLEMAN said: I agree with Dr. Colburn as to the desirability of timely enucleation in the case of a laboring man to save his time, but should ophthalmitis set in I should not, under any circumstances, enucleate the eye. I believe it is rare for German operators to risk removing an eye in a case of ophthalmitis, but in England they scarcely hesitate to remove an eye under any circumstances. I have never regretted recommending a patient to have an eye enucleated, but I have sometimes regretted that I did not urge the patient to have the eye out in order to avoid the fearful risk of sympathetic inflammation. I am astounded at the position of so eminent an authority as Noyes who says, "I hesitate to enucleate the eye on account of appearances, and do not do so unless symptoms of irritation or inflammation appear which I cannot relieve with medical treatment." In nineteen out of twenty cases the lost eye is not worth saving, but is a blem-

ish, and an artificial eye would be more ornamental. And if a man wishes to get work he will deceive the very elect as to which is the real and which the artificial eye. I cannot see any advantage in not advising enucleation where the eye has been injured to such an extent as to menace the fellow eye.

DR. GILMORE asked Dr. Holmes why he did not try a magnet?

DR. HOLMES replied that he had been in so much doubt what to do that he thought best to first try incision and forceps. He did not believe the best magnet could have liberated the end of the steel, buried in the tissues of Fontana's space. It is remarkable that so long a piece of metal could have been thrown through the cornea, making so minute an opening, and lodged in the anterior chamber, as described, without injury to the iris or lens.

DR. COLEMAN said: To my mind the magnet in the eye is a delusion and a snare. For instance, if you introduce a magnet within the eye not knowing where the foreign body is before placing the point of your magnet, you have to search the whole cavity of the eyeball and reduce it to a jelly before you can extract the body. Granted no great harm is done if you do not extract it with the magnet, for you can afterwards enucleate the eye. But so far as I have tried it, and have seen others experiment with the magnet, it does not give satisfaction.

DR. HOLMES replied: That is very true in many cases where the steel cannot be seen with the ophthalmoscope, but I think where a view of the foreign body can be obtained early, the magnet may be employed with brilliant results. There are now so many cases reported with excellent results after extraction with the magnet, that I cannot think it a delusion and a snare by any means.

DR. COLBURN said: I recently saw an interesting case in which the foreign body was lodged about half way between the ciliary body and the entrance to the optic nerve. The operator cut through the sclera about where he thought it was lodged, passed the magnet in and brought out the foreign body apparently without wounding the retina at the point of attachment. The patient made a good recovery.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE.

Stated Meeting, January 13, 1887.

ALBERT N. BLODGETT, M.D., SECRETARY.

The meeting was called to order at 8 o'clock by DR. F. I. KNIGHT, Chairman. On motion, the reading of the records of the last meeting was omitted. The Chairman announced the subject for the present meeting to be a debate upon the danger to the public from

ARSENICAL WALL-PAPERS,

and called upon J. R. Chadwick to open the discussion.

DR. CHADWICK, in response, presented an interesting and vivid account of the occurrence of arsenical poisoning in his own family[1] on several distinct occasions, and spoke of the uncertainty which exists in relation to the presence of arsenic in wall-papers, even when the dealer presents the certificate of a chemist as evidence that the papers are free from this dangerous substance. At the close of his remarks, Dr. Chadwick offered the following resolution:

Resolved, That it is the opinion of this meeting that the clinical evidence already adduced in this and other countries, establishes beyond doubt the fact that arsenical wall-papers will, in many instances, produce symptoms of poisoning by arsenic in persons occupying the rooms whose walls are covered by such papers.

The resolution was seconded, and was then declared open for discussion.

The Chairman introduced Mr. J. F. Bumstead, the well-known paper dealer, who was invited to address the meeting. Mr. Bumstead responded by saying that he did not desire to occupy the time of the members to any great extent. In all large establishments there are many persons employed, and the facts in regard to the purchase of paper by Dr. Chadwick are, that Mr. Bumstead did not personally exhibit the papers, but a salesman in the service of the firm was the person who made the transaction. The statement was made to the purchasers that no papers would be shown except such as had been pronounced by chemists of repute to be free from arsenic.

It is desirable that the position of the paper dealers should be placed before the profession in a more correct light than is at present the case. The efforts and desires of the dealers are directed toward the elimination of dangerous articles from the colors and other processes of manufacture of wall-papers, and the substitution therefor of equally useful, but harmless methods of treatment, by which the health and lives of the people may not be endangered. Personally, the paper dealers do not place credence in very many of the alarming reports which are, from time to time, circulated in relation to the occurrence of dangerous interference with health from the action of the colors used in wall-papers. It is both a mistake and an injustice to suppose that the dealers do not take pains to have their wares examined in relation to their safety. Messrs. Bumstead & Co. have had four different chemists in their service during the last twelve years. The intention was to exclude dangerous papers from the business. About two or three years ago, an agreement was made between the wall paper manufacturers and the dealers, that the manufacturers should take back all arsenical papers. For some time the manufacturers would not accept any orders from the trade, on account of the great frequency of rejected papers, but lately they again consented to receive all papers returned to them which contain more than a trifling amount, called a trace, of arsenic. A portion of the present disturbance in regard to arsenical papers arises from the fact, that many of the papers now examined are such as were manufactured some years ago, and some of the papers have been for years on

[1] See page 206.

the walls of inhabited rooms, where they have produced no appreciable symptoms of poisoning until the present excitement was inaugurated. Certain papers are even now purchased from a stock which has long been in the store, and which may contain an amount of arsenic never at present used in the manufacture of wall-papers. The occurrence of arsenic in these accidental ways should not be looked upon as fairly representing the paper manufacture at the present time.

DR. C. E. STEDMAN said that he had little to offer to the remarks of those who had preceded him. Some years ago he purchased wall-paper from a firm now gone out of trade, and it was put on the walls of his house. For two or three years the occupant of that room was continually ill, the symptoms being a persistent diarrhœa, with colicy pains, etc.; and finally a severe form of eczema supervened, for which various forms of treatment were ineffectually tried, and at length the patient was placed under the care of Dr. Wigglesworth, of this Society. At a later period, Dr. Stedman for a time occupied the room in question as a sleeping room for himself, and soon became ill, suffering from an obscure form of ocular disease, for which he consulted Dr. Wadsworth, of this Society. After some time, Dr. Wadsworth suggested the possibility of arsenical poisoning, and that the wall-paper might be the source of the trouble, when the paper was subjected to chemical analysis, and was found to contain a large amount of arsenic. The paper was at once removed from the walls, and a paper substituted which contained no arsenic, since which time there has been no recurrence of the symptoms of poisoning, or in fact, any other signs of impairment of health in any member of the family.

PROFESSOR D. G. LYON, of Cambridge, was called upon by the Chairman, and rising, said that on the 19th of January last he caused the publication of a long account of the troubles which had occurred in his house and family, for which, in his mind, their existed no cause, except the arsenical paper on the walls of his house. His family consisted of three members, Mrs. Lyon, himself, and another instructor in the University. They were all affected by a variety of distressing symptoms, one of which was persistent insomnia. It was almost impossible for any member of the family to sleep at all. In addition to this, a common symptom was pain in the head, palpitation, general debility, etc., which proved refractory to all methods of treatment for its relief. Physicians were called, but were not able to alleviate the distressing conditions, which now began to cause serious alarm. Professor Sänger was consulted, and he examined the furnace, sewers, etc., but being unable to locate the trouble in either of these parts of the household apparatus, he at length suggested the possibility of the wall-paper being the agent which had operated so disastrously upon the family. This was immediately submitted to chemical analysis, and yielded a large amount of arsenic.[2]

[2] I had recently read the admirable paper of Professor Wood on the subject of "Poisoning from Wall-Papers," and observed that the symptoms which he there recorded, were almost identical with those experienced by the members of my family, from circumstances similar to those surrounding the cases mentioned in the article by Professor Wood.

Four rooms were covered with paper containing extremely large quantities of arsenic, as determined by chemical analysis. The papers were at once removed, and the walls recovered with papers which were free from arsenic, and the immediate result was the entire and rapid disappearance of all the symptoms of disease which had so long existed, and which had thus far been quite unaffected by any form of remedial treatment.

Chemical examination of the wall-papers of different dealers, a year ago, showed that more than 50 per cent. of the papers in the stock of the Boston dealers contained a much larger amount of arsenic than the bill at that time presented before the Legislature asked for. The manufacturers claim that a law which should limit the amount of arsenic contained in wall-papers would seriously affect their trade, and that certain forms of papers cannot be produced without the aid of arsenic, or at least, without the use of substances in which arsenic may exist. Within a stone's throw of my house in Cambridge are families which have suffered more than my family did. In all parts of this Commonwealth, cases of poisoning from the use of arsenical papers are known, and the appeal of all these people is only for a law by which they may be protected from a danger which they have no means of recognizing for themselves. Those people who bought wall-papers in Massachusetts, and especially in Boston, a year ago, assumed a serious risk to the health of their families, from the almost universal presence of arsenic in the wall-papers of that time. I could report more than forty families thus affected from this cause.

PROFESSOR E. B. YOUNG said that he has never appeared before the legislature, nor has he ever published anything in the papers in relation to the dangers from arsenic. He has been a long, but silent sufferer from the effects of poisoning by arsenic in wall-papers in his house. In his case the symptoms were a palpebral inflammation of both eyes with continual lassitude, weakness, etc. His daughter, formerly strong and robust, became weak, languid and feeble. Professor Young himself was not well. The occurrence of such an amount of sickness in his family without adequate cause made him anxious. He employed men to overhaul the sewers of the house, but the drainage was found in good condition. At this time Professor Lyon suggested the possibility of arsenic as the cause of their distresses, and the papers of the house were at once subjected to analysis. In a light-blue paper arsenic was found to the extent of 4.97 grains to the square yard. In some English cretonne used for upholstery, there was discovered 4.00 grains of arsenic to the square yard. This had been in service for some time, and had begun to wear, and with the destruction of the texture of the fabric, the arsenic had become more readily disseminated. The paper of another room contained $\frac{1}{4}\frac{3}{4}$ grain to the square yard. Professor Young's daughter was much troubled by an affection of the throat, for which she was placed under the care of Dr. Knight, the Chairman of this meeting, and, as she did not improve, she was sent to Dublin, where she began to get better. After a time the urine was

examined, and was found to contain arsenic. After the restoration of the house, the daughter's health was again restored, and a letter from her physician who has had the urine again examined, contains the the report, "no trace of arsenic in the urine at present." In the dining-room of the house arsenic was discovered in the paper. The result of all this has been to cause a large outlay in money, as well as a great amount of anxiety through a long time; and we feel that we have the right to demand legal protection from this known and recognized source of danger to our families. Nobody claims that arsenic causes *all* the illness in families, but it undoubtedly causes *some* of it. Nobody thinks arsenic does any good in the papers, and is certainly better out of the way, than to be thus a constant source of possible danger. Another case was that of the daughter of a clergyman of Jamaica Plain, who was ill from an obscure cause, but in whose house the papers were found to contain arsenic. She was quite well soon after the old papers were replaced with non-arsenical ones. Another case was that of an entire family in Cambridge, the name of which would attract attention as belonging to the higher walks of literature, in which there was unmistakable poisoning. Another instance occurred in Milton, where there is a house, one room of which possessed the peculiarity that every person who occupied this particular apartment was certain to become ill. Each member of the family had in turn occupied this chamber, and each in turn had been similarly affected. The paper from the walls of this dreaded apartment was analyzed and contained a very dangerous quantity of arsenic. An Episcopal clergyman and his wife were both poisoned by arsenical paper not long since. The husband was confined to the bed in the room, and grew worse, while the wife, who was not so ill, but could pass a good portion of the time out of the room, was not so seriously affected. Another well-marked case occurred in Waltham. Perhaps the most amusing fact, however, is that Professor Sänger was himself poisoned last summer at the seashore. He was assigned a room which was papered with highly arsenical paper, and was soon made ill by it. Professor Young then passed specimens of the papers removed from his house, to the members of the Society, remarking that there is absolutely no way in which arsenical papers can be detected excepting by chemical analysis, and that therefore the most careful selection is no protection against this danger.

Prof. Wm. B. Hills, of Harvard University, was then announced, and spoke as follows: It has fallen to me to examine as many papers, probably, as to any one in this city, during the past few years, and I now examine for two of the most prominent paper houses in the State. From my experience I am convinced that the present alarm concerning arsenical poisoning from this source is unnecessarily great. The results of analysis during the past few years show this fact conclusively, as the following figures will prove. During the period from 1879 to 1883 the percentage of arsenical papers was from fifty-four to sixty-five per cent. of all papers examined. In 1884 the percentage had fallen to forty-seven per cent. arsenical.

In the first series of figures, those from 1879 to 1883, from thirty-one to thirty-five per cent. of the arsenical papers were strongly or dangerously arsenical. In the second series of figures, the proportion of strongly arsenical papers had fallen to twenty-two per cent. In 1886 there was a large decrease in the arsenical papers, only thirty-three per cent. of all papers examined containing any traces of arsenic. Only thirteen per cent. of these papers contained anything more than a trace of arsenic. These figures are the more startling on account of the extreme delicacy of the Marsh-Berzelius test, which was employed in 1886 only; and it appears that the matter is slowly settling itself by the common efforts of the manufacturers and the trade toward satisfying the demand of the public that papers shall be made without the use of dangerous substances. It has been stated in this meeting that all papers are at present still strongly arsenical. This statement is not in accordance with my experience. Most of the papers taken from the walls of rooms are such as were manufactured some years ago, and may naturally be different in chemical composition from the papers made to day. The fact is that papers now manufactured do not contain a dangerous amount of arsenic. I do not think that it is desirable to appeal to the legislature until we know definitely the present state of the case, and until we know the limit which it is safe to establish in relation to the accidental presence of small amounts of arsenic in the papers. A law to prevent the sale of "Rough on Rats" would save more lives than a law to prohibit the sale of wall-papers containing a trace of arsenic.

Dr. H. J. Barnes asked what reason exists for the use of arsenic at all in the manufacture of wall-papers?

Professor Hills replied that there is no reason for its use. It is not used intentionally, but exists as an adulteration in some of the pigments employed in the preparation of the paper. It is an impurity in certain of the mineral pigments which have been employed in the manufacture of former papers. Manufacturers are now trying to keep the arsenic out of their colors.

Dr. Edward Wigglesworth said that he had but little to add to what had been said in relation to the dangers from arsenical papers. He had suffered in his own family of four persons, from this cause. The symptoms were not alike in all, but were clearly traceable to the papers on the walls. Among the peculiar symptoms in this instance were certain not mentioned by those who had preceded him, and one of these was a tremendous desire to urinate, with a burning at the neck of the bladder, which ceased as soon as the urine was passed. There was no kidney trouble, and no affection of the bladder or meatus, nor any other condition to account for the distress which was present. A little boy occupied a newly-papered room, and was soon affected with a palpebral irritation of considerable severity. The paper was analyzed and found to be arsenical. A little girl of three years was poisoned. Dr. Wigglesworth stated that both he and his wife are still ill from the effects of poisoning, and the papers were found to

contain from fifteen to twenty times the amount of arsenic which has been considered the limit of safety. When the symptoms of poisoning first became evident the cause was not recognized, and a journey to the South was made with the result that all symptoms of disease entirely disappeared. On returning, however, the original disturbances again appeared in their former intensity. The paper was removed and replaced by non-arsenical paper, and the family is now on the way to recovery.

DR. STEDMAN mentioned a case of eczema which had been treated by Dr. Wigglesworth. The child had been under the best of care before, and nothing in the shape of attention could have been rendered that had not been most conscientiously carried out. When the child was placed under the care of Dr. Wigglesworth, he at once decided that there must be some unsuspected cause for the disease. He went to the house of the patient, who was a dispensary case, and examined the plumbing with great care, and also inspected the premises in other directions. He at length decided to have the wall-paper examined, and it was found to contain arsenic in large amount. The child was removed to another room and soon became better, but was not well. Upon removing to another house, however, there was complete recovery from all symptoms of disease. The daughter of a medical friend was seriously ill, with symptoms which would not yield to treatment. The paper on the walls was examined and was found to be loaded with arsenic. In the house of a relative is one room which seems to be a source of disease to all who inhabit the apartment. It has proved nearly fatal to two persons, and many more have been ill from occupying it. The cause was not suspected until the paper was examined and was found to contain a very large amount of arsenic.

MR. C. TENNANT LEE, an analytical chemist, was present by invitation, and spoke as follows: The discussion of the subject of arsenical poisoning from wall-papers, which has been carried on here, is of a very interesting character, and the cases are numerous and interesting, but the matter seems to rest on a very insufficient basis, and must certainly be considered as not proven. The cases so often classed by physicians as arsenical poisoning are most generally deduced from defective or careless observation, and are in reality not due to arsenic at all. I have been surprised to see how often I have been consulted in relation to the sanitary conditions of dwellings, in which some dreadful condition was supposed to exist, and have found a defective drain, a leaky closet or some other hygienic fault, the remedial treatment of which has removed all symptoms of the threatened danger. It is often the case that a foul tank in connection with the furnace will cause serious, and sometimes truly alarming symptoms, but these causes are seldom heard of by the physician or public. The excitement at present in relation to arsenic, is due, in great part, to the fact that the attention of the public is at present directed to this subject, and every one is thinking of it. When the scare about arsenic has abated, the number of cases supposed to be the result of poisoning from this source will become less, and substantially the same immunity from the trouble will be restored, as existed before the people were so much aroused by this imaginary danger. Physicians make the mistake of frequently ascribing to arsenic those conditions which are due to quite another set of causes. The cases of arsenical poisoning thus far reported, all end in recovery, and the entire history of the present craze is but two or three years old. It is far too early to be certain that these are cures, or that arsenic will produce such a varied series of clinical conditions. An example of the careless way in which physicians often account for strange symptoms by wrong theories, was illustrated by a case in which a girl was sick in a room papered with an arsenical green paper. This was removed, but the girl died. Some sensitive persons are poisoned by simply passing by a bed of poison ivy. In a certain family a new carpet was bought, and from motives of economy, the family decided to sew the carpet themselves. Those engaged in this work soon fell ill, but on relaxing their occupation rapidly recovered. On resuming the carpet-sewing, the old symptoms quickly returned. The carpet was now examined by the physician and was found to be "full of arsenic." The carpet was then analyzed by a chemist, and not a trace of arsenic could be found in it.

Rose-aniline is made by reduction of the substance by means of arsenic. The scarlet shirts and stockings which cause so much irritation of the skin, do not, however, contain arsenic. They are colored by nitro-benzole colors, which are not arsenical. The workers in the manufacture of Paris green are said by their employers, not to be injuriously affected by the nature of the substance on which they are employed. The skin of the employees is sometimes made raw, but they are not poisoned by the arsenic. There is one other point in which physicians are greatly in error. The opinion is generally disseminated throughout the profession that the arsenic is liberated as arseniuretted hydrogen. This is a great mistake, as arsenic cannot be liberated in any natural way in this form, and therefore cannot be a source of injury to the public in this form.

PROFESSOR HILL, of Cambridge, said that within the last few months he had seen but few cases of poisoning from arsenic, but formerly he had seen a great many of these cases with Dr. Sänger. The idea of establishing a *limit* to the degree to which arsenic may exist in wall-papers seems faulty, from the fact that there is no reason for the use of arsenic at all in the manufacture of wall papers. There are occasionally substances used in the papers which may possibly contain a trace, but this is too insignificant to deserve notice. In most cases in which the paper is examined, the amount of arsenic is almost nothing, or the amount is quite large. There is no medium grade. It is almost nothing, or the quantity is very great. Colors can now be easily obtained which are free from arsenic as an impurity, and those colors should be employed in all papers.

DR. R. STURGIS stated that a case of poisoning was known to him, in which the paper had been upon the walls of the room since the year 1873.

Dr. Henry Carmichael said that, there is no protection without analysis. No eye can discern where the arsenic is deposited, and no other means will adequately detect its presence. There is need of a clearer understanding upon another point. When we say that a paper is free from arsenic, what do we mean? If we mean that the paper does not present the indication of minute traces of arsenic, then it has not been my fortune to have discovered any papers free from arsenic. All papers will present the traces of small amounts of this substance, under any circumstances. Some of the ores used among the mineral pigments which are employed in the manufacture of wall-papers often contain arsenic as an impurity. Such is the ore of iron, which is extensively combined in the colors of wall-papers. In this combination the arsenic is absolutely inert, and is quite harmless. In fact, this combination is almost identical with the preparation which is used in medicine, as the antidote to arsenic in cases of acute poisoning. Another source of error is found in the fact, that we are often inclined to lay the harm to the wall-paper when there are other substances from which the poisonous symptoms might occur with fully as much probability as from the paper on the walls, such as the colored fabrics of dress, or the decorations or upholstery.

Dr. F. W. Draper spoke of his researches upon the dangers of arsenic to those employed in its use, or exposed to its influence. He said that he did not consult the employers of the men, or the contractors who did the work, but that he went directly to the men themselves. From them he learned that those men whose duty required them to be in the presence of the arsenic, and to handle it, were often sick, and not infrequently were obliged to suspend their labors. It is difficult to understand the statement made by one of the speakers, that constant employment in contact with so powerful and injurious a substance as arsenic should be without harmful influence.

Dr. G. E. Francis, of Worcester, offered a word of caution in relation to the accuracy of the opinion that all the disturbances so frequently ascribed to arsenic are in reality due to this cause. Before any further appeal is made to the Legislature we should be prepared to meet our opponents in every direction. Let us suppose that a paper which has been in service for twenty years has at length caused the appearances of arsenical poisoning. The analysis of the paper proves that it contains 2 grains of arsenic to the square yard. Now the question which must be answered is this: How much arsenic has been lost by the paper during the many years of service, if it still contains so large an amount at present? If the paper, after so long a time, still contains a large amount of the poison, then certainly it could not have lost much during that time; for the arsenic can be in only one place at a time. We should seek to ascertain how rapidly arsenic is dissipated by exposure to the air, and find out the rate at which it leaves the paper. We shall then certainly not be so liable to erroneous opinions and statements.

Dr. B. F. Davenport stated that the papers of almost any manufacturers may contain arsenic, even if the color is absolutely free from any appreciable amount of the poison. There are two principal questions: First, how much arsenic is really present in honest and well-selected papers? The second question is: What is the minimum quantity of arsenic which may induce the symptoms of poisoning? One undoubted form in which arsenic may be liberated is in the form of arsenuretted-hydrogen, from the presence of arsenious acid in contact with moulding substances, which evolve the hydrogen gas. In a case in which suicide was committed by the aid of "Rough on Rats," there was an evident odor of arsenuretted-hydrogen on opening the stomach. The limit to which arsenic may be contained in wall-papers has received the attention of chemists all over the world, and only recently Professor Pettenkofer has suggested that the safety of the public would not be imperilled if the amount of arsenic did not exceed $\frac{5}{100}$ of a grain in each square yard.

Dr. E. W. Cushing asked Professor Wood if there is any method by which a country physician may make an approximate analysis, or ascertain if there is any considerable amount of arsenic in a suspected paper?

Professor Wood said that the organic matter may be easily destroyed by the addition of a small amount of sulphuric acid with water, and the liquid could then be filtered and submitted to any of the common tests. If it is desirable to obtain the mirror of arsenic in a tube, it will be necessary to employ a cubic decimeter of the suspected paper; if it is thought necessary to produce the mirror upon a plate, a larger amount of the paper will be necessary, and the amount of arsenic required to form a mirror in this way will roughly be about $\frac{1}{10}$ of a milligrame.

The Secretary then read the resolutions offered by Dr. Chadwick, after which the question of adoption of the same was put. The resolution was unanimously adopted.

CHICAGO GYNÆCOLOGIAL SOCIETY.

Regular Meeting, Friday, December 17, 1886.

The President, Chas. Warrington Earle, M.D., in the Chair.

(*Continued from page 195.*)

ÆTIOLOGY, PATHOLOGY AND CLASSIFICATION OF SALPINGITIS.

GROUP III.—FORMS OF INFECTIOUS SALPINGITIS PRODUCED BY SPECIFIC, BUT AS YET UNKNOWN, MICROBES.

1. *Salpingitis Syphilitica.*—This form has been described by Bouchard and Lépine (*Gazette Méd. de Paris*, 1866, No. 41). Both tubes were swelled to the thickness of fingers, and contained three gummata of the size of hazel-nuts. The description given by these authors of the tubal disease agrees fully with the changes brought about by syphilis in other organs. Of more recent authors, Gill Wylie expresses his opinion that tubal syphilis does occur ("Diseases of

the Fallopian Tubes," etc., January 24 and February 7, *The Medical Record*, 1885). He says that "syphilis may cause salpingitis, just as it does otitis or ozæna." He also calls attention to the fact that "endometritis in syphilitic subjects has a most obstinate character." Compared with the actual observations of Bouchard and Lépine, the clinical remarks of Gill Wylie are, of course, of theoretical value only.

Like Lawson Tait, I, myself, have never yet had occasion to observe an undoubted case of tubal syphilis. We should bear in mind, however, that our attention has been but little called to the anatomy and clinical forms of this disease. We are not justified in denying this form altogether, as we are not in a position to dispute the reliable authors who have testified to its existence. Others may have seen what we ourselves have never had occasion to witness. I desired to give a most complete enumeration of the forms of infectious salpingitis hitherto described; I could as little have omitted *salpingitis syphilitica* as I could have done *salpingitis actinomycotica*, of which also, up to date, but one authentic case has been observed.

2. Occasionally we find in young girls, who have never had intercourse with a man, tubes filled with pus and pelveo-peritonitis. This has been accounted for in various ways. It has been said that in these cases a serous catarrh is intensified and changed to a purulent inflammation; that the suppuration is due to catching cold at the menstrual period, or to a trauma. These cases have also been adduced as evidence to show "that tubal suppuration is not always of gonorrhœal origin." Yet also in these cases there is always an infection, and usually a gonorrhœal infection. I, myself, have seen a comparatively large number of girls of all ages, from infancy to puberty, who were infected with gonorrhœa. We know how easily the infecting germs are carried from one person to another; for instance, parents and children may use the same sponge or bath-tub; the germs may adhere to fingers, linen, etc. The girls infected may further spread the disease in school, and so on.

Aside from the gonorrhœal, the tuberculous infection is to be mentioned as a cause of pyosalpinx in young girls. Just at present I am treating a girl of 17, who is suffering from a disease of both appendages, complicated with pelveo-peritonitis. The tubes can be distinctly felt, and are thickened and nodular. She has a hectic appearance, like that of a consumptive; her lungs, however, are normal. The father of the girl was, not long ago, operated on for tubercular orchitis. I hope that the operation will confirm my diagnosis of *salpingitis tuberculosa*.

Undoubtedly the microbes of traumatic infection may also, after accidental lesions of the external genitals, get into the tubes of young girls; they may also enter from the peritoneal cavity. I know of a case, a girl of 16, in which an inflammatory disease of the right uterine appendages developed, consequent upon a retro-typhlitis.

My reason for again considering these forms of infectious salpingitis belonging to Groups I and II, in regard to their occurrence in children, is this: there are evidently other infections of the female genital tract which have been observed in children, but which have not as yet been recognized as special forms; consequently they are to be placed in Group III, in opposition to the forms of the two preceding groups. E. Fränkel, of Hamburg, ("*Bericht über eine bei Kindern beobachteten Endemie infectiöser Kolpitis, Virch. Arch.*," February, 1885), and Johann C'seri, Budapest ("*Zur Ætiologie der infectiœsen Vulvo-vaginitis bei Kindern*," *Wiener Med. Wochenschrift*, 1885), describe an infectious disease of the vagina and vulva, the former believing it to be due to a special coccus, the latter to a coccus identical with Neisser's gonococcus.

Hennig (*Krankheiten der Eiliter*, p. 67), in a girl of ten, and Eppinger (*Prager Zeitschrift für Heilkunde*, 1882, p. 36) in an adult, witnessed a dysenteric inflammation extend to the mucous membrane of the genital tract; the disease in its new location assumed the appearance of a diphtheritic inflammation.

Suppuration is sometimes observed in the vaginæ of children suffering from helminthic disease. In these cases the suppuration is not caused by the irritation of the parasite, especially the oxyuris, but by certain microbes carried into the vagina by the parasites. The nature of these microbes has not as yet been sufficiently investigated to allow of their classification.

It has long been known that certain infectious diseases, like typhoid fever, scarlatina, variola, cholera, may invade the genital tract. The local affections are probably caused by the same specific microbes which produce the typical constitutional disease. This, however, still remains to be proven.

At the close of this enumeration, I wish to repeat that in every case where the vagina or uterus is the seat of one of the diseases named, such disease may extend into the Fallopian tubes. I am well aware that I am standing on an unsafe scientific basis regarding my third group of forms of infectious salpingitis. For this very reason I deemed it advisable to group them together, thus keeping them apart from the better known forms; besides, I desired to point out the object which should be kept in view in investigating this subject and in endeavoring to elucidate it still further. It is, finally, self evident, that there are also mixed forms of salpingitis. Different varieties of micro-organisms may enter the tubes, either simultaneously or successively. The forms most frequently found combined are the microbes of the gonorrhœal and tuberculous, and of the gonorrhœal and traumatic infection, and those of the different varieties of the latter.

Every physician whose scientific standpoint is the same as mine will admit that matters regarding salpingitis are immensely more complicated than Lawson Tait imagines, and that it is not sufficient to make an abdominal section, to remove the uterine appendages, and to satisfy oneself with the diagnosis of pyosalpinx in case the tubes are found filled with pus; but that it is our duty, employing all the means furnished by modern science, to endeavor to make an accurate diagnosis of the form of disease affecting the uterine appendages before the operation, and afterwards to add to our clinical observation careful

pathological and bacteriological examination of the specimen. This certainly is a higher standpoint than that occupied by Lawson Tait, to whom the removal of the uterine appendages is the chief thing, and who, neither before nor after the operation, concerns himself with the nature of the disease treated. He admits, himself, that in every fifth case he made an error in diagnosis. In a man like Lawson Tait, so great in his own estimation, it seems rather small to attempt to conceal his ignorance by resorting to insulting and scurrilous remarks in regard to German scientists. I advise Mr. Lawson Tait to learn German and to read the works of German gynecologists: he may then perhaps come to the conclusion that there is much which he might profitably study.

Here in Germany, Lawson Tait is held in high esteem, as he deserves to be, on account of his brilliant practical results. We have long since, however, ceased to regard as serious his theoretical utterances, which pretend to be scientific. The tone which he adopts in his polemic writings does not prevail with us in Germany, and it is certainly looked upon as undignified by every gentlemanly Englishman. I am, sir, etc.,

DR. M. SAENGER,
Privatdocent at the University of Leipsic, President of the Obstetrical Society of Leipsic.

DR. EDWARD B. WESTON, on presentation of a thesis entitled

METRITIS,

read by the SECRETARY, was elected Fellow of the Society.

DOMESTIC CORRESPONDENCE

ONE OF THE "ITINERANT SYSTEMS" OF RECTAL SURGERY.

Dear Sir:—In a recent number of THE JOURNAL I described the amusing instrumental outfit of the itinerant practitioners upon piles, fistulæ, and fissures. The following is a condensed statement of the oldest of these secret "systems" so far as it relates to rectal ulcers. The information is from a trustworthy source, but I am not at liberty to use the name at present:

Once or twice a month, as the itinerant comes around on his circuit, he inserts his little speculum, cleans out the ulcer, and applies to it a solution of nitrate of silver, 40 grains to the ounce. Between the applications, the patient uses a morning and evening treatment himself. Each morning he is to evacuate the bowels, then inject the rectum with lukewarm water, and finally insert into it a little ointment consisting of 3 grains of carbolic acid and 8 grains of sulphur to the ounce of vaseline or lard.

For evening treatment he uses "Brinkerhoff's Ulcer Remedy," having the following composition:

R.	Extract of hamamelis (distilled).....	fl. ʒv.
	Solution of persulphate of iron.....	" ʒj.
	Cryst. carbolic acid.....	grs. ij.
	Glycerine.....	fl. ʒij. ɱx.

Add half a teaspoonful of this to the same quantity of starch, and about an ounce and a half of water. Inject into the rectum every evening.

This energetic use of nitrate of silver will of itself often cure a fissure, as has long been well known to us. I find, however, that if the ulcer is situated upon the sensitive verge of the anus, as it usually is, the application is atrociously painful, causing suffering equal to that of an incision. I am now experimenting upon the plan of daily unfolding the fissure, washing it out with mild antiseptics, and then packing it with dry iodol. I am not prepared yet to state final conclusions, but there is reason to think that many fissures may be cured in this way without incision, and with little or no pain.

EDMUND ANDREWS, M.D.

No. 6 Sixteenth St., Chicago, February 10, 1887.

COCAINE IN URETHRAL CARUNCLE.

Dear Sir:—In the *British Medical Journal* of January 1, 1887, is a query regarding the use of cocaine in urethral caruncle, as to strength of solution, pain during and after operation, and whether the caruncle is removed by excision or cautery.

In August, 1886, I was called to see Miss W., æt. 16, who had been lying helpless for one month with a urethral caruncle. She was lying on her back with the legs crossed, and unable to move on account of the pain. I applied a 5 per cent. solution of cocaine on absorbent cotton, and having no scissors with me, I trimmed a small twig flat, pushed it up under the caruncle to steady it, and removed the growth with one sweep of my pen-knife. The cocaine acted within five minutes, rendering the caruncle painless, and before I left the house the patient was out of bed and walking about the house. There was no pain during or after the operation, and the hæmorrhage was inconsiderable. Very truly yours,

J. D. EGGLESTON, M.D.

Worsham, Va., February 1, 1887.

INTERNATIONAL CONGRESS.

NINTH INTERNATIONAL MEDICAL CONGRESS, Section IV--Obstetrics.

The attention of gentlemen who desire to contribute papers to the Section of Obstetrics, is respectfully invited to the following extracts from the Rules of the Preliminary Organization:

"Brief abstracts of Papers to be read in the Sections shall be forwarded to the Secretaries of the proper Section on or before *April 30, 1887*. These abstracts shall be treated as confidential communications, and shall not be published before the meeting of the Congress. Papers relating to topics not included in the list of subjects proposed by the officers of the Sections, may be accepted after April 30, 1887, and any member wishing to introduce a topic not on the regular lists of subjects for discussion, shall give notice of the same to the Secretary-General, at least twenty-one days before the opening of the Congress. The titular officers of each Section shall decide as to the acceptance of such proposed communications, and the time for their presentation.

No communication shall be received which has already been published or read before a Society.

"The official languages of the Congress shall be English, French and German. Each paper or address shall be printed in the '*Transactions*' in the language in which it was presented. Preliminary abstracts of papers and addresses shall also be printed in the language in which each is to be delivered. All discussions shall be printed in English.

"All communications and questions relating to the special business of any Section, must be addressed to the President or one of the Secretaries of that Section. As many details of the Congress and numerous appointments of officers are yet to be completed, other circulars will be issued from time to time, as circumstances may demand."

The meetings of the Section of Obstetrics will be held in Washington, D. C., on the afternoons of September 5, 6, 7, 8, 9 and 10, 1887.

PROF. DE LASKIE MILLER, M.D., *President.*
2011 Prairie Ave., Chicago.

W. W. JAGGARD, M.D.,
2330 Indiana Ave., Chicago,
JOSEPH KUCHER, M.D.,
33 East 33d Street, New York,
} *Home Secretaries.*

MISCELLANEOUS.

NEW FOREIGN JOURNALS.—*Revista de Medicina e Chirurgia* is the title of a new monthly journal published in Oporto, 56 Rua de Libertade, the first number of which appeared in January.

Therapeutische Monatshefte is the title of a new monthly journal published in Berlin, and edited by Professor Oscar Liebreich, A. Laugaard, and S. Rabow. The first number appeared in January.

Annales de l'Institut Pasteur.—M. G. Masson, 120, Boulevard St-Germain, announces the journal of this name, soon to appear, to be published monthly, under the editorship of M. Duclaux, with the assistance of MM. Graucher, Chamberland, Nocard, Roux, and Straus.

A PRIZE ESSAY ON HAY FEVER.—At its last meeting, September, 1886, at Bethlehem, N. H., the U. S. Hay Fever Association decided to offer a prize for the best essay from a competent source, preferably a physician, on some question relating to *Æstivis*, or Hay Fever. The amount is necessarily small; but as the accepted essay will be published in the Association's report, when the extent of its circulation, and the character of those whom it will reach, shall be considered, it is thought that the successful treatise will give to its author a reputation worth the effort.

In order to carry out the above the following is announced officially:

1. Subject of the essay, Hay Fever. (a) Its pathology. (b) The predisposing, and the aggravating causes. (c) Advice to the sufferer.

2. The essay not to exceed *four thousand words*, and to be as practical and non-technical as possible.

3. The manuscripts to be received at the office of Samuel Lockwood, Freehold, New Jersey, not later than April 30, 1887.

4. Each manuscript to have a motto under the title, and to be accompanied with a sealed letter containing said motto, also the name and address of the author. These letters not to be opened until after the award is decided.

5. The prize to be $25. The accepted essay to be published immediately in the Association's annual report, one hundred copies to be given the author.

6. The Committee of Award: Samuel Lockwood, Chairman of Committee on Scientific Facts; Frank B. Fay, President U. S. H. F. A.; Charles C. Dawson, Secretary U. S. H. F. A.

CENTRALBLATT FÜR BACTERIOLOGIE UND PARASITOLOGIE.— Dr. Uhlworm, Terrasse 7, Cassel, Germany, the editor of this journal, requests that American authors will send reprints or papers containing their articles on the subjects to which his journal is devoted, directed to his address, as given above.

AN ELECTRIC PRIZE.—A prize of 50,000 francs is offered by the French Minister of Education for a discovery rendering electricity economically applicable in the shape of heat, light, chemical action, mechanical power, transmission of messages, or treatment of disease. M. Bertrand, of the Académie des Sciences, is chairman of the committee of award.

THE HAIRS OF OUR HEADS.—It is said that a German of an inquiring turn of mind and much patience has taken four heads of hair, of equal weight, and counted the individual hairs. A red head was found to contain 90,000, a black 108,000, a brown 109,000, and a blonde 140,000 hairs.

BACTERIOLOGY AND ITS CLINICAL THERAPEUTICS is the title of the general address which will be delivered by Professor Mariani Semmola before the Ninth International Medical Congress.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 5, 1887, TO FEBRUARY 11, 1887.

Major Blencowe E. Fryer, Surgeon, ordered to Ft. Lowell, Ariz. Ter. S. O. 29, A. G. O., Feb. 4, 1887.

Capt. L. Y. Loring, Asst. Surgeon, leave of absence still further extended three months on surgeon's certificate of disability. S. O. 29, A. G. O., Feb. 4, 1887.

Capt. Louis Bruhenrin, Asst. Surgeon, granted leave of absence for four months, with permission to go beyond sea, to take effect when his services can be spared by his department commander. S. O. 28, A. G. O., Feb. 3, 1887.

First Lieut. C. C. Barrows, Asst. Surgeon, ordered for temporary duty as Post Surgeon at Ft. Barrancas, Fla., to take effect upon the expiration of his present leave of absence. S. O. 24, Div. Atlantic, Feb. 3, 1887.

First Lieut. Jno. L. Phillips, Asst. Surgeon, leave of absence further extended one month. S. O. 29, A. G. O., Feb. 4 1887.

First Lieut. Leonard Wood, Asst. Surgeon, ordered to proceed to these hdq'rs and report to the Dept. commander for temporary duty. S. O. 12, Dept. Ariz., Jan. 31, 1887.